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The Impact of Fast ForWord on MCT Scores and Student Achievement

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Abstract of a Dissertation
Submitted to the Graduate Studies Office
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
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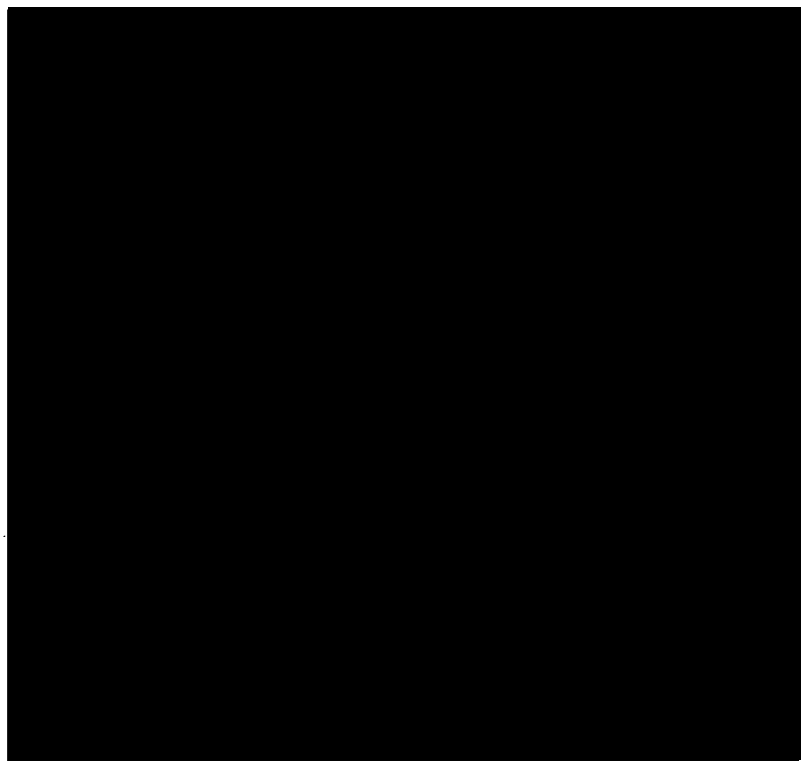
Approved:



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ABSTRACT

THE IMPACT OF *FAST FORWORD* ON MCT SCORES

AND STUDENT ACHIEVEMENT

by Michael Harvey Van Winkle

May 2009

Educators today were concerned with how the No Child Left Behind Act of 2001 dealt with the improvement of education throughout the United States. Schools should have put forth a greater effort and reduced the achievement gap between different groups of students based on race, gender, special education status, and if that student was economically disadvantaged. A problem was identified as low student MCT scores in the state of Mississippi. A tutorial method that claimed to help improve students in the areas of reading and language was identified as Fast ForWord.

This study set out to find if there was a significant improvement in student Mississippi Curriculum Test (MCT) reading and language scores after students completed the computer based program Fast ForWord. This study also set out to find if the teachers, teacher assistants, parents and administrators had a positive perception by about the Fast ForWord program. In other words did they feel the program improved student MCT reading and language scores? A sample of two hundred fifty one students was utilized in this study. A sample of one hundred four educators and parents was utilized in this study also.

The survey measured the perception that educators and parents had about the Fast ForWord program. The instrument measured the academic gain

or loss by students in grades six through eight who had successfully completed the Fast ForWord program. The survey data was examined by reviewing all the variables in the descriptive statistics. The study found that administrators had a higher level of confidence than any of the other groups of educators or the parents.

A paired samples t-test was used to compare the MCT reading and language scores before and after completing the Fast ForWord program. The finding was not positive so the researcher ran a Pearson Chi-Square test to find out exactly how many students improved, stayed the same, or decreased their MCT reading or language score. The finding was that the majority of students either remained at the same level of proficiency or dropped a level of proficiency after completing the Fast ForWord.

ACKNOWLEDGEMENTS

The writer would like to thank the dissertation committee, Dr. Ronald Anthony Styron, Dr. James T. Johnson, Dr. David E. Lee, and Dr. Gaylynn Ann Asher Parker for their continued support and patience in working with the researcher on this study. A special thank you to Dr. Styron for his work in helping the researcher to put this document together and for making trips to the Gulf Coast branch of USM for timely work sessions to complete the document. Special thank you to Dr. J. T. Johnson for his work in helping the researcher compile the statistics used in the making this document. Dr. J. T. Johnson was instrumental in the forming of the research questions and improving the survey instruments utilized in this study. The researcher could have never completed the dissertation without the help of these individuals.

The writer would also like to thank the school district for allowing him to conduct this study. This study will prove to be beneficial not only to the school district, but also to other school districts in the State of Mississippi and in the Nation. The information, that this study revealed, will help school districts make informed decisions about how to use their tutorial resources that were spent on low performing students. The researcher had the complete cooperation of the central office staff and the principals of the participating schools utilized in this study. Without their assistance this study would not have been completed so efficiently and in a timely manner. The writer would like to thank Mrs. Donna Fleming for her work in proofing the document. Mrs. Fleming was an English

teacher at a local high school. She provided the researcher with expertise in the areas of English and in Writing.

Finally, the writer would like to thank his wife Lynda, and his two sons, Blake and Derek. Their ability to adapt to not having the researcher around for much of the time was instrumental in the completion of this study. They had to pick up the slack around the house to keep the family functioning while the researcher went to class and also to give the researcher time to work on this dissertation. The love, support, and encouragement by the family, gave the researcher motivation to continue on this complicated path. We will all celebrate on this graduation day in May 2009 because all of you have played an important role in the completion of this task. God has truly blessed me to have such a wonderful and caring Christian family.

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CHAPTER I

INTRODUCTION

Problem Statement

The problem with many of the schools in the state of Mississippi was that many students had low Mississippi Curriculum Test (MCT) scores. MCT scores were the state guidelines utilized in all public schools to ensure that all students received an adequate education. There were many penalties that were associated with low MCT scores for the schools and their school districts. First, there was the public embarrassment of being placed in the news media as a low performing school. The school district could have lost valuable funding if it had not made corrective actions and improved student MCT and Average Yearly Progress (AYP) scores. If the situation of being a low performing school continued, the state could have stepped in and taken over the school. The state would have had the power to limit funding and would have had the ability to replace personnel as they deemed necessary. They could have replaced any of the administrators, principals, teachers, and board members. The state had the power to do whatever was needed to make the school or district a successful level three school.

There was a great need to improve educational opportunities for all students in the United States of America. Mathis (2003) stated that *The No Child Left Behind Act of 2001* implied that schools should put forth an effort in reducing the achievement gap and strengthening the educational level of all students. There was a huge disparity of academic achievement between different groups

of students based on race: White, African American, Asian, Hispanics, and Native Americans. There were also different levels of academic achievement based on other factors such as gender, special education status, and the social economic status. The achievement gap between these groups remained significant and the gap had to be closed.

Ediger (1993) stated that students needed an interesting reading program of study to achieve academically. His research showed that the most important factor in student learning was an effective teacher teaching in the classroom. The other major factor was how much a student read per day. It was asserted that students required an interesting stimulus to engage them as readers. His research confirmed that there was a correlation between the amount of time a student spent reading and the level for their academic achievement.

Fast ForWord

The Fast ForWord program was designed for all students in Kindergarten through the twelfth grade. Fast ForWord claimed to help in developing the mind and in strengthening the memory, attention, processing rate, and sequencing for students. The Fast ForWord program was designed to help young readers become proficient readers. Fast ForWord indicated that it could help students achieve one to two year gains in reading, in just two to three months. Also, it claimed to be effective with enhancing skills of middle and high school students. These skills were often essential in the preparation for college tests and the fast pace that would be required of advanced courses in education.

One of the founding scientists of Fast ForWord, by Scientific Learning Corporation, was Steven L. Miller, Ph. D. who was a senior vice president for outcomes research at Scientific Learning. Dr. Steven Miller joined Scientific Learning after serving in the capacity of a research faculty position at the Center for Molecular and Behavior Neuroscience at Rutgers University. His expertise was in the assessment and treatment of developmental language and reading disorders. Dr. Miller's research background was in the area of neuropsychology at Rutgers University. Dr. Miller was an author with more that seventy-five publications that included twelve commercial software programs. He held thirty-nine United States Patents at the time of this writing. Dr. Miller's most recent research included the development of intervention programs for children using neural models of learning. *Discovery Magazine* has recognized his work in their annual Awards for Technology Innovations. Dr. Steven Miller was also a co-recipient of the Thomas Alva Edison Patent Award in Medicine.

The other founding scientist of Fast ForWord, by Scientific Learning Corporation, was Michael M. Merzenich, Ph. D. Merzenich was the Francis A. Sooy Chair of Otolaryngology in the Keck Center for Integrative Neurosciences at the University of California at San Francisco. Dr. Merzenich's expertise lied in the field of brain plasticity. Michael Merzenich also had expertise in the development of skills and abilities through experience and learning. He has been awarded more than fifty patents and has helped to develop several therapeutic training programs, which include the Scientific Learning Fast ForWord products. He graduated from the University of Portland and completed his doctoral work at

Johns Hopkins University. Included in some of his scientific awards for neuroscience are the international Ipsen from France and the Zulch prize from Germany. La Fondation Ipsen and Zulch prize are awarded to scientists for work that was deemed to be of particular importance and relevance by prestigious juries. As Chief Scientific Officer of Posit Science, Dr. Merzenich strived to improve the brain health of people of all ages, by effective using non-invasive tools that connect the brain's natural plasticity.

Mississippi Curriculum Test

The Mississippi Curriculum Test (MCT) had three sections that students in grades three through eight had to complete. The three sections were reading, language, and math. Students were given an examination in each subject area with no time limit. Each subject area reading, language, and math had forty-five questions. Students were graded on how many questions they answer correctly. Based on the correct number of answers, students were given a scale score and then assigned a level of proficiency. The four levels of proficiency were from the lowest to the highest rank: Minimum, Basic, Proficient, and Advanced. Schools were graded on how many students they place in the basic, proficient and advanced levels of proficiency. Schools and school districts were then placed on a level of one to five with five being the best level of accreditation. Each public school was classified based on its achievement and educational growth as a level one: low-performing, level two: under-performing, level three: successful, level four: exemplary and level five: superior performing.

MCT proficiency levels were scaled as Advanced, Proficient, Basic, and Minimal. The goal was for all students, in Mississippi, to perform at the proficient level or above. Students at the advanced level consistently performed in a manner clearly beyond that required to be successful at the next grade. Students at the proficient level demonstrated solid academic performance and mastery of the content area knowledge and skills required for success at the next grade. Students who performed at this level were well prepared to begin work on even more challenging material that was required at the next grade. Students at the basic level demonstrated only partial mastery of the content area knowledge and skills required for success at the next grade. Remediation may have been necessary for these students. Students at the minimal level were below basic and did not demonstrate any mastery of the content area knowledge and skills required for success at the next grade. These students' required additional instruction and remediation in the basic skills that were necessary for success at the grade tested.

There was a great need for in school tutorial work with students. Although the vast majority of students could grow intellectually with an adequate program of instruction from the schools many could not. The state of Mississippi had developed three tiers of education to help students grow intellectually and to make sure students continued to meet the Mississippi Department of Education required objectives. MDE required an instructional model that was designed to meet the needs of every student. This model consisted of three tiers of instruction:

1. Tier I: Quality classroom instruction based on MS Curriculum Frameworks
2. Tier II: Focused supplemental instruction.
3. Tier III: Intensive interventions specifically designed to meet the individual needs of students.

Tier I consisted of quality classroom instruction based on Mississippi Curriculum Frameworks. This was the basic classroom instruction that every student received while they attend school. Each student received the same level of instruction that all other students received from the instructional staff at the school. If Tier I was not effective then the student moved on to Tier II.

Tier II consisted of focused supplemental instruction for students who were simply not getting it through Tier I instruction. These students required addition assistance to ensure that they grew intellectually and continued to meet the Mississippi Department of Education required objectives. This required the students to have an additional two hours of instruction during the week and during the school day. This instruction could not have replaced the student's Tier I instruction. This instruction was in addition to the quality classroom instruction based on Mississippi curriculum frameworks. If Tier II instruction was not sufficient then the student moved on to Tier III.

Tier III consisted of intensive interventions specifically designed to meet the individual needs of students. These students required even more assistance to ensure that they grew intellectually and continue to meet the Mississippi Department of Education required objectives. This required the students to have an additional five hours of instruction during the week and during the regular

school day. This instruction could not have replaced the students Tier I instruction. This was in addition to the quality classroom instruction based on Mississippi curriculum frameworks. If Tier III was not sufficient, then the student was recommended for a special education evaluation.

Tier III, which was an intensive intervention specifically designed to meet the individual needs of students, was usually a computer based program. According to Amberg (2001), students needed a self paced tutorial to help them with a wide range of language skills. The tutorial helped students learn how to improve their reading ability. The self-paced computer assisted technology adjusted to each individual student's skill level and it continued to monitor student progress. A trained teacher, in the computer program, could have assisted the student in the classroom. This teacher had to be highly trained in the computer program and its functions. A tutorial or an inclusion teacher was placed in the room to serve the students' needs. Many parents did not have this high level of training to help the struggling student at home. In addition, this instruction had to take place during the school day.

This study of "The Impact Fast ForWord had on MCT Scores and Student Achievement" was a vital area of concern for all citizens in the great State of Mississippi. This study took a look at the impact of a computer program called Fast Forward and the effect it had on MCT scores and student achievement. The study focused on test scores, and perceived opinions of parents or guardians, teachers, teacher assistants, and administrators of students in the middle school years to see if they felt there was a positive difference in MCT scores and

student achievement. This study included data for three school years 2004-05, 2005-06, and 2006-07.

One of the biggest concerns of educators was how to teach a room full of diverse learners. In other words, how would educators differentiate their instruction to a vast variety of learners in their classrooms? Educators wanted to know how to deliver instruction that would appeal to such a diverse audience, of students. Teachers wanted to be able to help all students reach their full potential during the time the teachers had the students in their classroom. So many times teachers just taught to the middle academically and hoped for the best.

The purpose of this study was to find out if there was a significant difference in reading and language MCT scores by the middle school students in a rural county school district, which had successfully completed the Fast ForWord program. The study examined records for three years 2004-05, 2005-06, and 2006-07 from the Mississippi Curriculum Test (MCT). The MCT scores that were reviewed were those by middle school students who had successfully completed the Fast ForWord program. This study concentrated on middle school students, those who were in the sixth, seventh, and eight grades.

This computer program Fast ForWord targeted the lower performing students. The program utilized color, action, and graphics to entice the student to want to improve. Many school districts across the United States of America had purchased this Fast ForWord program to help their lower functioning students and to increase their level of functioning in the areas of language and reading.

> The American public education system could be compared to the Disney classic, *Beauty and the Beast*. We are beautiful because we try to teach all students. We are ugly because we try to teach all students the same way at the same time. Even before *No Child Left Behind* and the new emphasis on school accountability, there was always the pressing dilemma of how to reach students with such a wide range of needs. The most effective teachers are cognizant of this challenge and constantly strive to differentiate instruction in a way that engages all learners. (Benigno, 2006, p. 107)

This large rural county school district in the southeast section of the state of Mississippi had invested thousands of dollars on the computer-based program Fast ForWord. The county school district had also invested most of the in-school tutorial available time for this program Fast ForWord. The benefits of this study would demonstrate if the investment in time and money had benefited the targeted area of students of minimum, basic, and the lower quartile of proficient. The same information obtained in this study could be utilized in comparative studies by other school districts throughout the United States of America. The question that needed to be answered was, "Was there a significant improved difference in reading and language MCT scores, by the middle school students in the county school district who have successfully completed the Fast ForWord program?"

Research Questions

1. Was there a significant improved difference in language MCT scores, by middle school students of all sub groups (gender, ethnicity, and social economic status) that had successfully completed the computer-based program Fast ForWord?
2. Was there a significant improved difference in reading MCT scores, by middle school students of all sub groups (gender, ethnicity, and social economic status) that had successfully completed the computer-based program Fast ForWord?
3. Did teachers, staff, and parents feel that the computer-based program Fast ForWord helped students improve their language MCT scores?
4. Did teachers, staff, and parents feel that the computer-based program Fast ForWord was beneficial to improving student confidence in language before taking the MCT?
5. Did teachers, staff, and parents feel that the time spent in the computer-based program Fast ForWord was an excellent use of instructional time for students to improve their language MCT scores?
6. Did teachers, staff, and parents feel that the teacher's ability to assist students in the classroom with the computer based program Fast ForWord improved their MCT language scores?
7. Did teachers, staff, and parents feel that the computer-based program Fast ForWord helped students improve their reading MCT scores?

8. Did teachers, staff, and parents feel that the computer-based program Fast ForWord was beneficial to improving student confidence in reading before taking the MCT?
9. Did teachers, staff, and parents feel that the time spent in the computer-based program Fast ForWord was an excellent use of instructional time for students to improve their reading MCT scores?
10. Did teachers, staff, and parents feel that the teacher's ability to assist students in the classroom with the computer based program Fast ForWord improved their MCT reading scores?

This study compared MCT scores by grade, by school, and by sub groups: race, gender, SPED students, and economically disadvantaged. Race was divided into five groups: Caucasian, African American, Asian, Hispanic and Native American. Gender was divided into two groups: male and female. The study further broke down MCT scores into a final group of students, those who were economically disadvantaged and those who were not.

The researcher hypothesized that students, regardless of race, gender, or economical status, in grades six, seven, and eight, who had successfully completed the Fast ForWord program, improved significantly in the areas of reading and language on the Mississippi Curriculum Test. The research question was: Could the Fast ForWord program improve the Mississippi Curriculum Test scores in the areas of language and reading by middle school students in the selected rural county school district. The literature reviews in Chapter two supported the hypothesis.

Justification of the Study

The No Child Left Behind (NCLB) Act of 2001, which was a revision of the Elementary and Secondary Education Act, set forth new requirements, incentives and resources for the states to improve education. President George W. Bush signed the *NCLB* legislation into law on January 8, 2002. This new law proposed significant challenges for all of the individual states to comply with and created strong standards in each state for what every child should know and learn in reading and math in grades three through eight. Student progress and achievement had to be measured every year for each student in grades three through eight.

The law set specific deadlines for the states to expand the range and frequency of student testing, revamp their accountability systems and guarantee that every teacher was qualified in their subject area. *NCLB* required that individual states had to make verifiable annual progress in raising the percentage of students who were proficient in reading and math. The states also had to reduce the gap between advantaged and disadvantaged students. Simultaneously, the new law increased funding in several areas, including kindergarten through third grade reading programs, before-and-after school programs, and the law provided the individual states with a greater flexibility in using federal funds as they needed.

The *No Child Left Behind (NCLB) Act of 2001* was an ambitious law and it forced states to move more rapidly to improve the achievement of each and every student. Hopefully the combination of *NCLB*'s high expectations and the

existing state education agendas proved successful where past reform efforts had fallen short.

The *Individuals with Disabilities Education Act (IDEA)* was the primary federal program that authorized state and local aid for special education and related services for children with disabilities. President Bush signed the *Individuals with Disabilities Education Improvement Act (IDEIA) (P.L. 108-446)* on December 3, 2004; this was a major reauthorization and revision of *IDEA*. The new law preserved the basic structure and civil rights guarantees of *IDEA* but also made significant changes in the law. Immediately upon President Bush's signature the requirements regarding "highly qualified" special education teachers became effective.

IDEIA required each state that received federal assistance, to collect and examine data to determine if significant disporportionality had occurred in the State and local educational agency (LEA) based on race and ethnicity. The Mississippi Department of Education (MDE) kept close tabs on school districts in the state to assure that there was not a significant disporportionality of students with disabilities based on race and ethnicity in the State of Mississippi.

Students needed to be able to grow intellectually and to be able to take their place in society. Our government was established to have an educated population in order to understand the issues of the day and be able to vote in elections. In order to vote people needed to understand thoroughly the issues that would affect them, their community, their state, and their country. This issue

meant that our schools had to succeed. They had to be able to educate all of the students that entered their schools.

Schools and school districts were evaluated on how their students performed on standardized testing. Schools and school districts whose students did not achieve a level three accreditation rating for a period of two consecutive years were placed into school improvement. If the school district continued to perform poorly the school district was taken over by the State. In most cases the Mississippi Department of Education appointed a conservator to run the school district. The conservator controlled the funding and they had the power to modify the school district personnel as needed. Schools and school districts that did not make Average Yearly Progress (AYP) for a period of two consecutive years were placed into school improvement. AYP represented the annual academic proficiency targets in reading and math that the state, school districts and schools must reach to be considered on track with the federally mandated goal of one hundred percent proficiency by school year 2013-14. AYP was the Federal Governments way to measure individual student growth during the school year. This standard took into account where a student began at the beginning of the year and where the student finished at the end of the year. AYP also measured each sub group of students in addition to the entire student body. If a sub group met the number requirement of forty members that group also had to meet AYP as a group just as the school had to. If that sub group did not meet the forty member requirement the group did not have to meet the requirement, but they were still included individually with the school.

Schools were graded on how their students perform on standardized testing. Students in grades three through eight utilized the Mississippi Curriculum Test (MCT) and began in 2008 to utilize the Mississippi Curriculum Test Two (MCT2). Students in grades nine through twelve utilized the Subject Area Test Program (SATP). The SATP evaluated students in four areas: Algebra One, Biology One, English Two, and American History.

Vocabulary

AYP: Adequate Yearly Progress, AYP represented the annual academic proficiency targets in reading and math that the state, school districts and schools must reach to be considered on track with the federally mandated goal of one hundred percent proficiency by school year 2013-14. This was what NCLB measured to check if schools were performing satisfactory.

EZ Test Tracker: Web based program that helped school staff to identify weakness and strengths with students. The program had information from MCT, MCT2, and SATP. This program was developed by Educational Leadership Solutions.

FEMA: Federal Emergency Management Agency

IDEA: Individuals with Disabilities Education Act was the primary federal program that authorizes state and local aid for special education and related services for children with disabilities.

IDEIA: Individuals with Disabilities Education Improvement Act this was a major reauthorization and revision of IDEA.

IEP: Individualized Educational Plan set up for students who were ruled with a disability as ruled by the State.

LEA: Local Educational Agency (School District)

Low Social Economic Status: Students in this subgroup were all students who were enrolled in the free or reduced lunch program.

MDE: Mississippi Department of Education

MCT: Mississippi Curriculum Test – Grade Level Testing Program, from 2002 until 2007, that all students in grades three through eight took to evaluate if a student was proficient it three core areas: Reading, Language, and Math.

MCT2: Mississippi Curriculum Test Two– Grade Level Testing Program, from 2008 until Present, that all students in grades three through eight took to evaluate if a student was proficient it the core areas: Language Arts and Math. This test required a more rigorous curriculum in order for students to become proficient on this evaluation.

MCT Proficiency Levels: Advanced, Proficient, Basic, and Minimal. The goal was for all students in Mississippi to perform at the proficient level or above.

Advanced: Students at the Advanced level consistently performed in a manner clearly beyond that required to be successful at the next grade.

Proficient: Students at the Proficient level demonstrated solid academic performance and mastery of the content area knowledge and skills required for success at the next grade. Students who perform at

this level were well prepared to begin work on even more challenging material that was required at the next grade.

Basic: Students at the Basic level demonstrate partial mastery of the content area knowledge and skills required for success at the next grade. Remediation may have been necessary for these students.

Minimal: Students at the Minimal level were below Basic and did not demonstrate mastery of the content area knowledge and skills required for success at the next grade. These students' required additional instruction and remediation in the basic skills that were necessary for success at the grade tested.

Middle School: An educational institution with a grade classification of six, seven, and eight.

MSIS: Mississippi Student Information System was the State of Mississippi student data base system. The State utilized the system to track students.

NCLB: No Child Left Behind Act of 2001 (Public Law 107-110) was a revision of the Elementary and Secondary Education Act, set forth new requirements, incentives and resources for the states to improve education.

Otolaryngology: A medical field with trained specialist in diagnosing and treating medical disorders of the ear, nose and throat.

Retainees: Students who were not promoted to the next grade. These students repeated the same grade in school for a second time.

SATP: Subject Area Testing Program, was comprised of Algebra I, Biology I, English II, and United States History from 1877. These were usually taken by high school students.

Scale Score: Was a three digit number, used on the MCT that had been translated from the raw score of each student. This was the number that determined what level of proficiency a student had been placed in.

SLI: Specific Language Impairment.

Teacher Assistant: A non-certified personnel who assisted a teacher or other school personnel.

Summary

In chapter one a problem was identified, by the researcher, as low student MCT scores and low student achievement in the state of Mississippi. This was a problem that many of the schools in the state of Mississippi were dealing with. A tutorial method that claimed to help improve low MCT scores was identified as Fast ForWord. The computer-based program Fast ForWord claimed to improve student learning in the areas of reading and language.

There was a great need to improve educational opportunities for all students. The *No Child Left Behind Act of 2001* stated that schools should put forth great effort in reducing the achievement gap and strengthening the educational level of all students. There was a huge disparity of academic achievement between different groups of students based on race, gender, special education status, and if the student was economically disadvantaged.

The achievement gap between these groups remained significant and the gap had to be closed.

CHAPTER II

REVIEW OF RELATED LITERATURE

Hurricane Katrina

During the time that this study was being formulated, Hurricane Katrina destroyed one of the middle schools in the school district that participated in the study. It was important to view how the impact of this hurricane affected the students, parents, teachers, staff, and administrators during this time. Additionally, the study looked at the impact the federal government played in helping the students of this area, particularly within the schools of this study.

"Feds get 'F' for Katrina response to schools" (2007, p. 10) reported that the federal government's response to the schools in the affected area was very inadequate. This report was very critical of the response from Federal Emergency Management Agency (FEMA). The report stated that there had never been a time, since the Great Depression, that so many students were displaced from their schools. Many schools were damaged or completely destroyed and students had to find other educational institutions to enroll and continue their education. Many more homes were destroyed forcing parents to move to other locations away from the affected area.

Two months after the hurricane more than 138,000 students were still not in school "Feds get 'F' for Katrina response to schools" (2007, p. 10). Twenty to thirty thousand students in kindergarten to twelfth grade did not attend school anywhere. The estimate was that ten to fifteen thousand students did not return

to school at all. The school district involved in this study that was affected by the hurricane had for the most part recovered by the school year 2006-2007.

During the last two years the United States Federal Government had spent small amounts of money, resources, and time compared to the national budget that was given to help the area affected by Hurricane Katrina. This translated into fewer dollars available to help students, parents, and schools in the affected area. The article further stated that in looking at the total funds available to the federal government, only two percent had been committed to address the needs of the students and schools in the area devastated by Hurricane Katrina.

In the final analyses the federal government had failed to help the people in the affected area, the Gulf Coast Region, as a whole ("Feds get 'F' for Katrina response to schools," 2007, p 10). There needed to be an urgency to help insure that the students and schools had the resources available to continue the educational process for all of the people in this area that was devastated by Hurricane Katrina.

Accountability

The *No Child Left Behind (NCLB) Act of 2001*, which was a revision of the Elementary and Secondary Education Act, set forth new requirements, incentives and resources for the states to improve education. President George W. Bush signed the *NCLB* legislation into law on January 8, 2002. This new law proposed significant challenges for all of the individual states to be in compliance and created strong standards in each state for what every child should know and

learn in language arts and math in grades three through eight. Student progress and achievement had to be measured every year for each student in grades three through eight. The *No Child Left Behind (NCLB) Act of 2001* was an ambitious law and has forced states to move more rapidly to improve the achievement of each and every student. Hopefully, the combination of *NCLB*'s high expectations and the existing state education agendas proved successful where past reform efforts have fallen short.

The law set specific deadlines for the states to expand the range and frequency of student testing, revamp their accountability systems and guarantee that every teacher was qualified in their subject area. *NCLB* required that individual states had to make verifiable annual progress in raising the percentage of student's proficient in reading and math. The states also, had to reduce the gap between advantaged and disadvantaged students. Simultaneously the new law increased funding in several areas, including kindergarten through third grade reading programs, before and after school programs, and the law provided the individual states with a greater flexibility in using federal funds as they needed to without a lot of red tape.

The *Individuals with Disabilities Education Act (IDEA)* is the primary federal program that authorized state and local aid for special education and related services for children with disabilities. President Bush signed the *Individuals with Disabilities Education Improvement Act (IDEIA) (P.L. 108-446)* on December 3, 2004; this was a major reauthorization and revision of *IDEA*. The new law preserved the basic structure and civil rights guarantees of *IDEA* but

also made significant changes in the law. Immediately upon President Bush's signature the requirements regarding "highly qualified" special education teachers became effective.

IDEIA required each state that received federal assistance, to collect and examine data to determine if significant disporportionality had occurred in the State and local educational agency (LEA) based on race and ethnicity. The Mississippi Department of Education (MDE) kept close tabs on school districts in the state to assure that there was not a significant disproportionality of students with disabilities based on ethnicity in the State of Mississippi.

Schools and school districts were evaluated on how their students performed on standardized testing. Schools and school districts whose students did not achieve a level three accreditation rating for a period of two consecutive years were placed into school improvement. If the school district continued to perform poorly, the school district was taken over by the State. In most cases the Mississippi Department of Education appointed a conservator to run the school district. The conservator controlled the funding and had the power to change the school district personnel as was needed. Schools and school districts that did not make Average Yearly Progress (AYP) for a period of two consecutive years would be placed into school improvement. AYP was the Federal Governments way to measure individual student growth during the school year. This standard took into account where a student began at the beginning of the year and where the student finished at the end of the year. AYP also measured each sub group of students in addition to the entire student body. If a sub group met the number

requirement of forty members that group also had to meet. If that sub group did not meet the forty member requirement the group did not have to meet the requirement, but they were still included individually in the school.

Hass (2006) Interviewed Rucks H. Robinson, school superintendent for the Rural County School District in Mississippi. Mr. Robinson had been in the field of education working as a teacher, principal, assistant superintendent, director of special education, and consultant for thirty-three years. He served the school district as a superintendent for four years leaving office in December 2007. The following were the results of that interview in which Mr. Robinson reflected on the educational standards and what had to be done to improve them. Hass (2006) recorded the following:

> Question: What do you think was problematic about America's school system, and what would you attempt to fix? There is more right with America's school system than there is wrong with it. The United States operates the only public school system in the world that teaches all children, not just the children from the upper socioeconomic class. There are many challenges. This is a nation of immigrants. School Districts are constantly faced with the challenge of teaching children who speak many different languages. This is always going to be an issue. When the students come to school and the teacher speaks one language and the students may speak a different language as they enter the school.

This creates obvious problems that the schools are going to deal with.

Question: How would you compare our school system with corporate America? Corporate America is very selective about what they deal with. Corporate America is very fortunate in that they want only the finest ingredients in their products. The public school system of the United States doesn't have that luxury. Schools accept everybody who comes to our school. Sometimes you have students who come to you prepared for school, and sometimes you have students who are unprepared for school. Public schools are a reflection of the communities they serve. People need to understand that. And the schools generally have the same problems that their communities have. In spite of all that, every school in this school district was able to achieve AYP in every single subgroup. Every school achieved Level 5, which is the highest accreditation you can receive in the state of Mississippi. There are 152 school districts in the state, and only seven had all Level 5 schools and all AYP, and we were one of the seven and this school district was the largest school district in the state to achieve that feat.

Question: What has this school district done to help students who were not performing well? The school district had an entire segment of students that the schools felt we were not reaching. For

> example, the IEP sub-group was targeted with a neurological intervention product called Fast ForWord. Before the schools utilized that product, we had four schools that did not meet AYP. After using the product, those four schools not only made AYP but they achieved mastery of objectives. That product was part of the puzzle. By itself, it wasn't the only answer, but it was a critical piece of the entire puzzle coming together and it was a fantastic demonstration of success. (www.scilearn.com/results)

Williams (2008) revealed that the *No Child Left Behind Act* had more bark than bite. He stated that since each State had the authority to regulate education and not the Federal Government, *NCLB* had little effect on the Local School Agencies. *NCLB* stated that schools and school districts that failed to meet these objectives would fall into school improvement. The schools had to be restructured, placed into some type of improvement plan, and required some type of corrective action. Since *NCLB* has been implemented not a single school had undergone a major reorganization. The Federal Government had been unable or unwilling to hold school districts accountable by using force. There was simply too much wiggle room for schools districts to utilize. School districts often were given the opportunity to determine their own improvement plans. Most underperforming school districts had not felt any real pain from being labeled as a failing school district. The biggest discomfort from being labeled a failing school district was the public embarrassment the school received in the news media.

According to Williams (2008) in the school year 2005-06 over 1,500 schools nationwide were identified as needing some type of school improvement. This meant that they failed to make adequate yearly progress (AYP) as a school or in one of the sub groups within the school. Each sub group that was measured had to have at least forty students included. These schools were placed on school improvement status, but they were allowed to select their own school improvement plan. Maryland was the only state to utilize some extreme type of reorganization. One school district, in particular, had been unwilling or unable to make a lasting improvement for their school district. The state rejected the school district's improvement plans and seized control of the school district as part of the corrective actions allowed by *NCLB*. There was so much political fallout from the takeover that the State returned power to the school District. This individual case exposed just how weak the state government was in trying to enforce the *NCLB act of 2001*.

Many advocacy groups had stated that there was too much wiggle room for school districts to maneuver through (Williams 2008). Many comments that were heard from school district leaders made it clear that they had little respect for *NCLB* or its consequences. Some school districts placed the blame for their failure to make AYP on a small group of students who created a sub group. These school districts wanted to focus on the majority of students and how they performed on state tests. Ninety-seven percent of the students from a particular school district were proficient and made AYP, but this school district was labeled a failing school district, because one of the sub groups was not proficient and

therefore did not make AYP. These school districts also pointed out that it was easier for the individual schools to make AYP than it was for the school district to make AYP, due to the sub groups.

According to Williams (2008) there was a tendency to support stability in school administration by the school districts. They veered away from any type of restructuring plan that eliminated any administrators at underperforming schools or school districts. Instead, the emphasis was placed on new curriculum products and additional professional development. These remedies were added to the school districts instead of trying to replace school administrators, teachers, and or staff. Many educators took the glass is half full approach stating that they just needed more support to help their school districts to meet AYP and their school district would be a high performing school district. This was in response to the half empty approach of the *NCLB* legislation that wanted to replace the people in charge of the school district when a school district did not make AYP and was labeled a poor performing school district.

Williams (2008) stated the following:

> The United States Department of Education, while establishing the overarching goals and regulations for districts under *NCLB*, has made the deliberate decision that it is generally up to the states to make the law happen. "Our guiding principle in implementing *No Child Left Behind* is to regulate only when it is absolutely necessary, because non-regulatory guidance tends to provide states and local educational agencies with greater flexibility, "former

undersecretary of education Eugene Hickok testified before a congressional committee in July 2002. (p. 47)

Auditory Processing Disorders

According to Burns (2003), "Most professionals and parents believed that auditory processing disorders were a core component of the attention, memory and language difficulties of children" (p. 258). This study looked at the relationship between auditory processing, attention, memory and language learning. Scientists found that timing was an important part of learning speech and language. Some students perceived very slowly the changing sounds, such as animal sounds and music. These same students perceived quickly changing sounds, such as speech easier. For children with auditory processing difficulties, speech, where the sound wave was very complex and changes rapidly, was much harder to focus on and perceive (Burns, 2003).

Burns (2003) found that many children with language problems had used the Fast ForWord Language program. The developers of the program agreed that intensive training was an important key to the success of the training process. The developers had collected information from language therapists around the United States who had used the computer-based Fast ForWord Language program with children diagnosed with autism. Almost all of these therapists reported gains in listening, memory, attention, and language after ten to twelve weeks of training. Therapists around the United States and abroad have used the computer based Fast ForWord Language program with many different children since 1999.

Language Learning

Loeb et al. (2001) stated that the American Speech Language Hearing Association states that language was a complex system of symbols whose conventional use was determined by connections among biological, cognitive, psychosocial, and environmental factors. The successful use of language required learners to understand what others say, generate ideas, and express those ideas using vocabulary and sentence structures that were appropriate for the speaking environment. The ability to point to pictures that represent sentences, the ability to repeat sentences, and the ability to define words were examples of Norm-referenced test. They can only predict which children were best at dealing with language because they assessed isolated components of language.

Parents and teachers were most interested in language intervention procedures that helped to improve student's language learning and use. The effectiveness of language intervention approaches should be assessed to measure the functional language changes and not just the changes on standardized tests. During this study samples of language were collected and analyzed from the children who were participants in the study. Interventions using Fast ForWord appeared to influence the length of some of the children's utterances, but it did not improve their grammaticality. Sixty percent of the children who utilized the Fast ForWord products showed significant changes in mean length utterance after the training. The test group results suggested that

training with the Fast ForWord had greatly influenced the language production processes that enabled children to include more words in their utterances. Gilliam et al. (2001) stated the following:

> Fast ForWord Language was not more effective in improving general language skills or temporal processing skills than a nonspecific comparison treatment or specific language intervention comparison treatments that did not contain modified speech stimuli. These findings call into question the temporal processing hypothesis of language impairment and the hypothesized benefits of using acoustically modified speech to improve language skills. One popular approach to language intervention for school-age children is Fast ForWord Language. Fast ForWord Language has received a great deal of attention in the scientific literature and the press. The developers of Fast ForWord Language assert that the program leads to neural reorganization that causes an increased ability to perceive fast changing acoustic input, and that such improvement in leads to subsequent gains of one to one-and-one-half years on standardized tests of language skills after six weeks of training. (p. 272)

Teaching Grammar

Bishop et al. (2006) described an approach to teaching grammar which had been designed for school aged children with specific language impairment (SLI). This approach utilized shapes, colors, and arrows to make the grammatical

rules of English very clear to students who utilized the Fast ForWord program. He stated there was evidence which supported the use of this approach with older children in the areas of past tense and comprehension comparative questions. He concluded that there was sufficient evidence that this kind of intervention would be effective with older children. This statement challenged the current move, which was to reduce direct intervention for school aged children. Direct intervention was the best way to help students in the areas of language and reading.

Burns (2003) stated the following:

> To get a feeling of how fast speech is, think of counting time in seconds, as one one-thousand, two one-thousand. This uses four syllables for a second of time. So, single syllables of speech are usually 1/4 second long. Within that syllable, there are often three or more speech sounds a child or adult has to perceive. Some complex words, like specks or stretched, have five speech sounds. Dr. Tallal and her colleagues have found that many children who struggle to learn language have a listening window that is slower than 1/4 second long. Many children for whom speech is unclear because of slower listening windows tend to ignore speech or tune out when they are spoken to. (p. 32)

Computerized Instruction

Burns (2003) found that Dr. Merzenich and Dr. Tallal developed a computer-based learning tool that drives the brain to handle faster and faster

auditory information while at the same time teaching speech sound distinctions and language skills. The technology was patented and the product was released commercially as Fast ForWord in 1997 (it has since been renamed "Fast ForWord Language"). The Fast ForWord Language product was comprised of seven training exercises, each designed to stimulate a different fundamental skill needed for effective communication. One exercise simply enabled children to perceive and sequence two different tones that were presented at increasingly faster rates. Three other exercises, sound exercises, trained children to distinguish sounds of English. The final three exercises taught new word meanings, grammatical meanings, and improved the ability to follow long complicated directions. The child worked on five out of seven of these carefully designed processing and language activities for twenty minutes each, five days a week, for six to ten weeks or longer.

The thought was that if the speech of a child could be slowed down to a rate that matched a child's listening window, it would be easier for the children to understand and to learn. Dr. Tallal collaborated with Dr. Michael Merzenich to develop a system for presenting speech sounds and language learning activities. They always knew students brains could be taught new and complicated tasks, especially if they built on the skills they had already acquired. This was great news for all children, even those with autism or Asperger's Syndrome. Students remodeled their brains to learn and use language faster and better despite existing processing strengths or limitations (Burns, 2003).

Viadero (2004) stated Fast ForWord was a computer based assisted program created by the Scientific Learning Company to improve reading skills in students. It claimed to rewire the brain in order for students to learn. According to Scientific Learning, this program addressed cognitive and language skills and continued to improve the key cognitive skills through exercises focused on sound-letter comprehension, phonological awareness, and beginning word recognition. The computer program developers of Fast ForWord claimed that this computer-based program helped students hone their auditory skills. They also argued that this Fast ForWord program would be the key to reading and hailed the program as one of the early educational success stories of brain-science research. Fast ForWord had helped to bridge the gap between the laboratory and the classroom and was one objective of a new generation of computer-assisted study programs.

According to Ediger (1993), the younger students needed an interesting reading program of study to achieve academically. Middle school students needed to be involved individually in finding and selecting reading materials to guarantee student attention. An ample variety of topics for students to select from was a must in choosing books. The reading materials available had to be written on different achievement levels. Books selected by middle school students have complemented assignments with their present reading achievement level. Students needed to be interested in the topic in order for them to enjoy the reading assignment.

Troia (2004) evaluated the effectiveness of the computer assisted intervention program known as Fast ForWord Language. The researcher found that the Fast ForWord Language program combined concentrated training in English language skills that accelerated the English language learning skills of students who were non-native English language speakers. Students who were the least fluent in spoken English demonstrated superior gains in expressive language and sight word recognition. Thus, Fast ForWord Language had a substantial impact on oral language skills and reading performance of the children in this study.

Mohler et al. (2005) studied the progress of seventh grade students who participated in the computer assisted intervention program known as Fast ForWord. The focus of the study was on how the reading level changed over a school year. This study was set in a culturally diverse middle school with a large population of military personnel. The data collected included interviews with parents and teachers along with numerical data that was collected. The data suggested that students who participated in the Fast ForWord reading program experienced increased levels test scores in reading level, concentration, and memory.

A study by Marler (2001) found that neither computer assisted language programs Fast ForWord language program, nor the programs from Laureate Language Systems resulted in any significant improvement in the students' language ability. Students continued to be tested weekly during treatment with the two computer assisted language intervention programs. One of the limitations

of this study was that it only included seven students, four boys with language learning impairments and three boys with typical language ability. Two of the students utilized the Fast ForWord language products and two of the students utilized the Laureate Language Systems products. The author stated that this was a preliminary study with a small sample size that limited his study and that there needed to be a more in-depth study.

Fast ForWord Solutions

Scientific Learning Corporation claimed that the Fast ForWord Language product improved language scores from one and half to three years over a six week period. Fey (2001) evaluated different aspects of this claim. He looked at four children who utilized the Fast ForWord Language program in their homes and measured the language changes of these four students. Three out of the four students successfully completed the Fast ForWord Language program and all of the children made improvements on the standardized language tests. Even though all students improved, the improvements were not as great as those previously reported by Scientific Learning Corporation. The parents and teachers did not report many differences in performance after the intervention; even so parents were generally satisfied with the program. The findings suggested that dramatic gains in natural language use were less likely and were not long lasting.

Scientific Learning Corporation had expanded its Fast ForWord programs by offering a language training program. This program was a self-paced tutorial to help educators understand and implement the training exercises. Fast ForWord offered a wide range of language skills in order to help students learn

how to improve their reading ability. The computer assisted technology adjusted to each individual student's skill level and it continued to monitor the progress of the students. Educators used an Internet database to follow the progress of all the students from any computer that had Internet capabilities, according to Amberg (2001).

Another study performed by Loeb (2001) found that Fast ForWord Language was a viable intervention option for children with language problems. The case studies suggested that children were likely to show improvements on standardized tests of language and knowledge when they had a positive experience when their children utilizing the Fast ForWord product. Some of the changes that parents expected on test scores were not as great as reported on earlier studies. Speech and reading scores were improved but only minimally. It was reasonable to expect improvements in children's language performance scores based upon the results of this study by using the Fast ForWord language program. The improvements were made in students even when the parents were the ones providing the Fast ForWord program in their homes. This study needed to be repeated to give us a better understanding as to whether the computer-based Fast ForWord program was effective in making significant improvement in children's language scores.

Summary

A review of the literature emphasized that a tutorial program for students was needed for those students who were labeled low performing. These same low performing students could have achieved and learned if they received

additional tutorial instruction with a trained professional. The United States operated the only public school system in the world that taught all children, not just the children from the upper socioeconomic class. This created many challenges for all school districts. This was a country that still had many students that did not speak the American language. School districts were constantly faced with the challenge of teaching children who spoke many different languages. This created obvious problems that the schools were dealing with. For most schools the IEP sub-group created a problem with the state accreditation. Many schools targeted that group with a neurological intervention product called Fast ForWord. The Fast ForWord product was only part of the solution, but it was a critical piece of the entire problem coming together to help bring success to the lower performing students.

CHAPTER III

METHODOLOGY

Preliminary Procedures

This study, "The Impact of Fast ForWord on MCT Scores and Student Achievement" took a look at students who had been placed into the Fast ForWord program. The researcher gathered the MCT scores from the previous school year and compared it to the MCT scores for the current school year for each student who had successfully completed the Fast ForWord program during the school years 2004-2007. In particular, the researcher looked at the scale score each student made on their MCT in reading and language. A comparison of the student MCT scale scores was made to find the differences, improved or decreased, that the computer program Fast ForWord made.

The researcher used the MCT scores to see if a correlation existed between the successful completion of the computer program Fast ForWord and improved MCT scores by all students who had completed the program. The study further compared the different sub groups of students, by gender, ethnicity, SPED, and social economic status to see if Fast ForWord made a difference in each sub group of students that completed the program. Gender subgroup was represented by female and male students. Ethnicity subgroup was represented by students in the following categories: Asian, Black, Hispanic, Native American, and Caucasian. The low social economic status subgroup was represented by all students who were enrolled in the free or reduced lunch program. A paired samples t-test was conducted to evaluate if there was a significant difference

between the MCT scale scores of students before and after they had completed the Fast ForWord program.

The researcher attempted to find out if the computer-based program, Fast ForWord, improved MCT scores and student achievement. Fast ForWord was a computer program that this particular school district had invested heavily. Students were selected to participate in the Fast ForWord program due to the following criteria:

1. Students with low MCT scores
2. Students with low final grades
3. Students who had failed the previous year
4. Students who were promoted from the previous year
5. Students who had low district assessments
6. Students who had low scores on progress monitoring
7. Students who were placed based upon teacher recommendations due to poor performance in the classroom.

This computer program Fast ForWord was utilized as a Tier III intervention, in the three-tier model the Mississippi Department of Education had instructed all school districts to utilize.

Reliability Measures

There were one hundred four people to complete and turn in the Perception Survey on Fast ForWord and MCT scores. The first four questions, one through four, were about the perceptions on Fast ForWord improving language skills. The survey instrument utilized a Likert scale of one to five with

one the lowest rating and five being the highest rating. The survey instrument gave five options on each question, one-strongly disagree, two-somewhat disagree, three-neutral, four-somewhat agree, and five-strongly agree. The survey instrument, Perception Survey, had a high reliability indicating a .943 on Cronbach's Alpha on the first four questions. The second four questions, five through eight, were about the perceptions on Fast ForWord improving reading skills. The survey instrument, Perception Survey, had a high reliability indicating a .945 on Cronbach's Alpha on the second four questions.

Data Collection

Data collection began on December 12, 2008 for the Perception Survey (Appendix A) on Fast ForWord and MCT scores. This survey obtained the perceptions that school staff, students, and parents had with this computer program. Data collection began with the researcher calling the schools where the students had participated in the study. The principal at each school agreed to help print, distribute, and collect the surveys. A copy of the survey was given to each school involved in the study. The middle school staff members including administrators, teachers, teacher assistants, and support staff, who were employed at the school during the school years 2004-2007, were asked to complete the survey and return it to the administration office secretary. They were instructed to follow the instructions and to fill out the survey truthfully. They were also instructed not to place their name on the survey to ensure that they would be anonymous. A copy was given to each student who completed the Fast ForWord program during these three years with instructions to take it home to

their parent or guardian and have them fill it out and return it to school. Survey recipients were asked to list which school site they were at one (1), two (2), or there (3). They were asked to indicate which gender they were male (1) or female (2). Survey recipients were also asked to pick a position that best described them Administrator (1), Teacher (2), Teacher Assistant (3), Parent or Guardian, or None of the above (5). After each survey recipient completed the demographic section they completed the perception section on Fast ForWord. There were eight questions on this survey, four dealing with reading and four dealing with language. The participants had a choice of one to five with one being the lowest rating and five being the highest rating.

1. Did teachers, staff, and parents feel that the computer based program Fast ForWord helped students improve their language MCT scores? (Perception Survey; question one)
2. Did teachers, staff, and parents feel that the computer-based program Fast ForWord helped students improve their reading MCT scores? (Perception Survey; question five)
3. Did teachers, staff, and parents feel that the computer-based program Fast ForWord was beneficial to improving student confidence in language before taking the MCT? (Perception Survey; question two)
4. Did teachers, staff, and parents feel that the computer-based program Fast ForWord was beneficial to improving student confidence in reading before taking the MCT? (Perception Survey; question six)

5. Did teachers, staff, and parents feel that the time spent in the computer-based program Fast ForWord was an excellent use of instructional time for students to improve their language MCT scores? (Perception Survey; question three)
6. Did teachers, staff, and parents feel that the time spent in the computer-based program Fast ForWord was an excellent use of instructional time for students to improve their reading MCT scores? (Perception Survey; question seven)
7. Did teachers, staff, and parents feel that the teacher's ability to assist students in the classroom with the computer based program Fast ForWord improved their MCT language scores? (Perception Survey; question four)
8. Did teachers, staff, and parents feel that the teacher's ability to assist students in the classroom with the computer based program Fast ForWord improved their MCT reading scores? (Perception Survey; question eight)

The researcher called each school to discover if the surveys had been completed and returned to the administration office. After the surveys were completed the researcher went to the schools to gather all of the surveys. The researcher entered all of the surveys into an Excel document. There were 104 completed surveys, about the perception of the Fast ForWord program, that were entered into the Excel document.

Data collection for Student Growth Survey (Appendix B) began on December 19, 2008 with the researcher requesting records of all students who successfully completed the Fast ForWord program during the school years 2004 to 2007. A complete list was obtained from the Fast ForWord coordinator for the school district. The list was in Word format and had to be converted to an Excel document. With the list completed the researcher began collecting the data with the researcher completing the Student data survey, Individual record for Fast ForWord and MCT scores, Student Growth Survey. The researcher utilized an on line computer program named EZ Test Tracker. This program was purchased by the School District to compare MCT scores of students and teachers. This process was very time consuming, but was extremely efficient in locating students in the study and gaining the information required for this study. The researcher recorded, by each student's name the school site, student gender, student ethnicity, whether the student was a special education student, whether the student was economically disadvantaged, and did the student successfully complete the Fast ForWord computer program. There were three school sites and they were labeled school site one (1), two (2), or three (3). The student gender was labeled male (1) or female (2). The student ethnicity was labeled as Caucasian (1), African American (2), Asian (3), Hispanic (4), or Native-American (5). Students were labeled as either being economically disadvantaged (2) or not economically disadvantaged (1). The year the student completed the Fast ForWord program was also recorded as 2004-05 (1), 2005-06 (2), or 2006-07 (3). Grade level for all students was recorded as sixth (6), seventh (7), or eighth (8).

The scale score on the MCT was recorded for the previous year as the pre-test and the current year as the post test. The questions that the researcher was attempting to answer with Student Growth Survey were the following.

1. Was there a significant improved difference in language MCT scores, by middle school students of all sub groups (gender, ethnicity, special education and social economic status) that had successfully completed the computer based program Fast ForWord? (Student Growth Survey; Individual record for Fast ForWord and MCT scores)
2. Was there a significant improved difference in reading MCT scores, by middle school students of all sub groups (gender, ethnicity, special education, and social economic status) that had successfully completed the computer based program Fast ForWord? (Student Growth Survey; Individual record for Fast ForWord and MCT scores)

There were two hundred fifty-one students who had completed the Fast ForWord program and completed the pre-test MCT and the post test MCT that were entered into the Excel document.

School District Approval

The county school district, in which the study was located, gave their full approval for the study to take place. The superintendent of the school district gave written permission (Appendix C) on November 28, 2006, for the study to take place. The school district was very interested to see the final results of a study that would survey the effectiveness of the Fast ForWord program as tutorial assistance for low performing students.

The superintendent wrote the researcher had permission to review the Mississippi Curriculum Test for the school years 2004-2005, 2005-2006, and 2006-2007. Students in grades six, seven, and eight were included in the study. This study concentrated on students who were low performing students and had completed the Fast ForWord program. These students also had to take the MCT during two of these three school years.

The researcher traveled to the school district office and visited the Fast ForWord facilitator for assistance in obtaining the records of the Fast ForWord participants during the school years 2004-2005, 2005-2006, and 2006-2007. Once a list of students had been obtained the researcher utilized the EZ Test Tracker program to obtain the information needed for the study. Student Growth Survey, Individual record for Fast ForWord and MCT; was utilized by the researcher to record the information from the EZ Test Tracker. The researcher recorded all of the information.

Research Questions

1. Was there a significant improved difference in language MCT scores, by middle school students of all sub groups (gender, ethnicity, and social economic status) that had successfully completed the computer based program Fast ForWord? (Student Growth Survey; Individual record for Fast ForWord and MCT scores)
2. Was there a significant improved difference in reading MCT scores, by middle school students of all sub groups (gender, ethnicity, and social economic status) that have successfully completed the computer based

program Fast ForWord? (Student Growth Survey; Individual record for Fast ForWord and MCT scores)

3. Did teachers, staff, and parents feel that the computer based program Fast ForWord helped students improve their language MCT scores? (Perception Survey; question one)
4. Did teachers, staff, and parents feel that the computer-based program Fast ForWord was beneficial to improving student confidence in language before taking the MCT? (Perception Survey; question two)
5. Did teachers, staff, and parents feel that the time spent in the computer-based program Fast ForWord was an excellent use of instructional time for students to improve their language MCT scores? (Perception Survey; question three)
6. Did teachers, staff, and parents feel that the teacher's ability to assist students in the classroom with the computer based program Fast ForWord improved their MCT language scores? (Perception Survey; question four)
7. Did teachers, staff, and parents feel that the computer-based program Fast ForWord helped students improve their reading MCT scores? (Perception Survey; question five)
8. Did teachers, staff, and parents feel that the computer-based program Fast ForWord was beneficial to improving student confidence in reading before taking the MCT? (Perception Survey; question six)
9. Did teachers, staff, and parents feel that the time spent in the computer-based program Fast ForWord was an excellent use of instructional time

for students to improve their reading MCT scores? (Perception Survey; question seven)

10. Did teachers, staff, and parents feel that the teacher's ability to assist students in the classroom with the computer based program Fast ForWord improved their MCT reading scores? (Perception Survey; question eight)

Institutional Review Board Approval

The researcher applied for Institutional Review Board approval for the study and received approval on December 8, 2008 (Appendix D). The protocol number was 28110303 with the project title; The Impact of Fast ForWord on MCT Scores and Student Achievement. Lawrence A. Housman, Ph. D., the Human Subjects Protection Review Committee Chair gave, approval on the research project (Appendix D).

Operational Procedures

This study compared three years of the Mississippi Curriculum Test (MCT) scores by middle school students in the sixth, seventh, and eight grades, who had successfully completed the Fast ForWord program, in a rural county school district in the Southeastern section of the State of Mississippi. Student MCT scores were compared to their previous years MCT scores for students who had successfully completed the Fast ForWord program. Student academic achievement was evaluated using the Mississippi Curriculum Test (MCT) scores from the spring of 2005 and 2006, before Fast ForWord use, and again in the spring of 2007.

Students in the state of Mississippi were divided into four distinct areas on the MCT; they were from low to high Minimum, Basic, Proficient, and Advanced. This study utilized these four measurements, Minimum, Basic, Proficient, and Advanced as a section of the data for the study. Since the student could show improvement and still retain the same classification as the year before (Minimum, Basic, Proficient, and Advanced) this study reviewed another component to indicate student improvement. That new component was the scale score the student achieved during each section, language and reading, of the MCT. The study took an in-depth look at the scale score on the MCT. Each section of the MCT had forty-five questions and the student number of correct answers was translated into a scale score. This study measured the MCT scale score, from the previous year, before a student had completed the Fast ForWord program and compared that to the MCT scale score after a student had completed the Fast ForWord program.

Students were evaluated using the Mississippi Curriculum Test before and after the Fast ForWord group completed the product. Scores from the 2004-2005 and 2005-2006 MCT assessments served as the pre-test, and the 2005-2006 and 2006-2007 MCT assessments served as the post-test. The Mississippi Curriculum Test was a standardized, state normed test of achievement. This test was administrated in the classroom and was a multiple choice type test. Subtests included language, reading, and math. The content in the reading was divided up into seven sub groups they were: context clues, word structures, word patterns, vocabulary, main idea, expanded comprehension and workplace data. The

content in language was divided up into four sub groups they were: editing, spelling, sentence structure, and meaning.

This study compared MCT scores by sub groups: ethnicity, gender, and economically disadvantaged. Ethnicity was divided into five groups: Caucasian, African American, Asian, American Indian, and Hispanic. Gender was divided into two groups: male and female. The study further broke down MCT scores into a final group of students, those who were economically disadvantaged and those who were not.

In this paper it was hypothesized that students, regardless of ethnicity, gender, or economical status, in grades six, seven, and eight, who had successfully complete the Fast ForWord program, improved significantly in the areas of reading and language on the Mississippi Curriculum Test. The research question was: Can the Fast ForWord program improve the Mississippi Curriculum Test scores in the areas of Language Arts and Reading by Middle School students in the selected rural county school district.

Participants

The participants for this study were made up of middle school students from a rural county school district in the Southeastern section of the State of Mississippi. This school district was the sixth largest school district in the state of Mississippi and had approximately eight thousand students enrolled during the past three school years. Students that participated in the study were those who attended this school district in the school years 2004-05, 2005-06, and 2006-07. Male and female students in grades six, seven, and eight made up the

participants in this study. This county school district was composed of three attendance centers and each attendance center had a middle school. The three middle schools were labeled middle school one, middle school two, and middle school three. Two of the middle schools were comprised of students who were in sixth, seventh, and eighth grades. One middle school was comprised of students who were in grades six and seven. To ensure that each attendance center consists of the same three grades, sixth, seventh, and eighth, the eighth grade students at the local high school, in that attendance center, were included in the study.

Middle school one was comprised of three school grades. Those grades that students attended this school were sixth, seventh, and eighth. Approximately twenty-six percent of sixth graders, twenty-eight percent of seventh graders, and twenty-eight percent of eighth graders were economically disadvantaged and qualified for free or reduced lunch during the three years of the study during the school years 2004-2007. Demographics see Table 1.

Table 1

Middle School One Demographics

Grade	Gender	Frequency
6	Female	103
	Male	102
7	Female	104
	Male	114
8	Female	109
	Male	103

Grade	Asian	Black	Hispanic	Native-American	Caucasian
6	2	11	3	0	189
7	2	12	3	0	202
8	1	13	3	0	189

Middle School two was comprised of two school grades. Those grades that students attended this school were sixth and seventh. The eighth grade students attended the local high school and were included with the middle school count. Approximately thirty-nine percent of sixth graders, thirty-six percent of seventh graders, and thirty-five percent of eighth graders were economically disadvantaged and qualified for free or reduced lunch during the three years of the study during the school years 2004-2007. During the school year 2005-06 Middle school two had ninety-five percent of sixth graders, ninety-four percent of

seventh graders, and ninety-five percent of eighth graders were economically disadvantaged, qualified for free or reduced lunch. The high percentage this year was due to Hurricane Katrina, the greatest natural disaster to hit the United States of America. Demographics see Table 2

Table 2

Middle School Two Demographics

Grade	Gender	Frequency
6	Female	133
	Male	140
7	Female	140
	Male	136
8	Female	144
	Male	143

Grade	Asian	Black	Hispanic	Native-American	Caucasian
6	25	32	3	1	213
7	20	32	5	1	218
8	22	31	7	1	226

Middle school three was comprised of three school grades. Those grades that students attended this school were sixth, seventh, and eighth. Approximately thirty-eight percent of sixth graders, thirty-three percent of seventh graders, and twenty-eight percent of eighth graders were economically disadvantaged and

qualified for free or reduced lunch during the three years of the study during the school years 2004-2007. Demographics see Table 3

Table 3

Middle School Three Demographics

Grade	Gender	Frequency
6	Female	108
	Male	106
7	Female	106
	Male	118
8	Female	100
	Male	110

Grade	Asian	Black	Hispanic	Native-American	Caucasian
6	1	16	0	0	197
7	0	15	1	0	208
8	0	12	2	0	195

Students were selected to participate in the Fast ForWord program to improve their MCT score and to improve student achievement. This was an attempt by the school district to improve student performance. Parents and Guardians were called and an appointment was set up for them to come to the school for a meeting with TST, Teacher Support Team. The TST committee was composed of the principal, TST chairperson, counselor, a teacher, and the

parents or guardians if they chose to come to the meeting. Prior to the meeting all pertinent data about the students had been obtained so that the committee could make an educated decision about the student. During this meeting a formal introduction of all participants was made by the TST chairperson. The pertinent information was passed out to all participants and then reviewed by all members of the committee. Discussion was opened to all members, so that any of the committee members were allowed to speak and express their feelings on this student. Options were presented to the parents or guardians and most often the Fast ForWord option was utilized for students who showed poor performance at school or on the MCT. Students then received a schedule change and were placed into the Fast ForWord class and this class took the place of their elective; physical education, annual staff, office aide, art, shop, music, or band class. This placement was for one semester during which time the student went to the Fast ForWord lab and worked on completing the program. Students were monitored the entire time they participated in the Fast ForWord program. A teacher was assigned to monitor the Fast ForWord program and was with the students each day.

TST Teacher Support Teams consisted of three tiers. Tier one was the basic instruction provided by the teacher in the classroom. Tier two interventions were two hours of instruction outside of the regular classroom instruction provided in Tier one. These two hours of instruction were provided every week during the school day and could not be included after school. These two hours had to occur on different days of one hour each day. Tier III provided more

intensive interventions and consisted of five hours a week. These five hours of instruction had to be performed on different days at the rate of one hour each day. Tier III had to be a researched based program. The State gave school districts the criteria for Tier III interventions. Each school district was allowed to choose its own, but it had to be a researched based intervention. During the entire process documentation of all interventions and the progress the student was making was being monitored. Some of the important items to remember were that Tier I consisted of quality classroom instruction for all students based on the Mississippi Curriculum Frameworks and the School District Curriculum Pacing Guides. It also included an ongoing progress monitoring student performance to identify struggling students before they fell behind or ended up failing the grade for the year. Tier I documentation included data that suggested that students who moved to Tier II needed focused supplemental instruction or interventions. Students who populated the MSIS Intervention Screen had to be reviewed and a determination had to be made with in the first twenty days of school. Therefore they had to be entered into Tier II or Tier III or no action necessary and that information was recorded into MSIS. Any student who had a failing grade average for any subject, especially reading, language, or math, at the end of any nine week grading term was placed in Tier II.

The Three Tier Process did not always apply in some limited situations such as the following. The following students were not placed in the Tier process immediately. An out of state student transfer or a student transfer in from another school district or agency within this State and who already had an IEP. Another

reason a student was not be placed on a higher Tier was that if a documented physical condition, of the student, by a qualified medical professional was such that it was determined that immediate child study procedures were warranted if the student was diagnosed that they had mental retardation, autism, blindness, deafness, traumatic brain injury, or constituted a danger to himself or others. A final reason the student would not placed on a higher Tier was when it is obvious that interventions would not meet the child's apparent educational needs, as in the case of a child with significant speech problems. In this instance the process of checking for a speech problem would apply.

Student Participation

Students, in the elementary schools, were selected to enter into the Fast ForWord program based on their MCT scores, retainees, classroom performance, and on teacher recommendations. MCT scores had to be minimum, basic, or lower quartile of the proficient range for the student to be included in the Fast ForWord program. Students who were retained, not promoted to the next grade, were included in the program. Students who were identified by their teachers due to poor performance in their current classes were included in the program. Teachers also recommended students, based off their judgment as a professional educator, to be included in the Fast ForWord program.

Students, in the middle schools and the high schools, were selected to enter into the Fast ForWord program based on their SATP scores, MCT scores, SPED placement, retainees, classroom performance, and on teacher

recommendations. SATP scores had to be minimum, basic, or lower quartile of the proficient range for the student to be included in the Fast ForWord program. MCT scores had to be minimum, basic, or lower quartile of the proficient range for the student to be included in the Fast ForWord program. Teachers in the SPED department recommended students to the Fast ForWord program and held an IEP meeting to properly place that child in the program. Students who were retained, not promoted to the next grade, were included in the program. Students who were identified by their teachers due to poor performance in their current classes were included in the program. Teachers also recommended students, based off their judgment as a professional educator, to be included in the Fast ForWord program.

Protocol was the type of program that the school was utilizing for the amount of time spent on the program. Three different types of protocol were available to be used a thirty minute protocol, a forty-eight minute protocol, and a fifty minute protocol. Schools choose a protocol based on the type of schedule the school was running. Schools that operated a six period day with 63 minutes to a class period opted for a fifty minute protocol. Schools that operated a seven period day with 53 minutes opted for a forty-eight protocol. There were plenty of protocols so that the school could work any schedule into the program. This school district employed a six period day at all of its middle schools and thus opted for a fifty minute protocol.

This study was conducted in a rural county school district located in a southeastern county in the State of Mississippi. The school district in the study

was a public school district. There were up to 300 student records involved in the study. In addition, there were up to 300 school staff, parent or guardian surveys. The MCT test scores were obtained by the researcher by utilizing the EZ Test Tracker Web based program the district has purchased. The researcher had full access to all of the student records by utilizing the program. The researcher contacted the Fast ForWord coordinator in the district office for a list of all students who had successfully completed the Fast ForWord program from the three attendance centers one, two, and three.

This study compared MCT scores by sub groups: Ethnicity, Gender, SPED, and Economically Disadvantaged. Ethnicity was divided into five groups: Caucasian, African American, Asian, Hispanic, and Native American. Gender was divided into two groups: male and female. The sample was also divided into two groups of students, those who were identified as SPED and those who were identified as regular education students. The study further broke down MCT scores into a final group of students, those who were economically disadvantaged and those who were not.

In this paper it was hypothesized that students, regardless of race, gender, or economical status, in grades six, seven, and eight, who have successfully complete the Fast ForWord program, improved significantly in the areas of reading and language on the Mississippi Curriculum Test. The basic research question was: Did the Fast ForWord program improve the Mississippi Curriculum Test scores for all students regardless of ethnicity, gender, or

economical status, in the areas of Language Arts and Reading by Middle School students in the selected rural county school district.

Instruments

Instruments that were utilized in this study were the Mississippi Curriculum Test scores, Fast ForWord successful completion scores. Other instruments that were utilized were Appendix A and B. Appendix A, perception survey, was utilized in gathering new data, from the Parent or Guardian, Teacher, Teacher Assistant, and Administrator, on their view of the effectiveness of the Fast ForWord program. Student Growth Survey was utilized in gathering archival data from the students MCT scores. Student Growth Survey measured the growth, if any, the student made after utilizing the Fast ForWord program. The perception survey and the student growth survey were developed by the researcher when he took course REF 791 at The University of Southern Mississippi. These surveys were developed with the instructors and fellow classmates help and guidance. The surveys were tested and modified by using the REF 791 class members during the spring term of 2007. The perception survey had a pilot test to check for validity and reliability.

Perception Survey was distributed by the researcher to the principals at the three middle schools. There were instructions given to the principal at that time. The principal handed out Perception Survey and requested that all staff members complete the survey. A list of students that had been complied by the researcher to see which students parents need to fill out a survey also were given to the principal. These were sent home with the students and their parents

or guardians filled it out and returned it to school. There was a one week time limit on returning the surveys.

Student Growth Survey was completed by the researcher with the help of the EZ Test Tracker Web based program. A list of students who had successfully completed the Fast ForWord program was obtained with the help of the Fast ForWord coordinator. This person worked out of the Special Education office in the central office of the school district. The student names were recorded on Student Growth Survey to help the researcher keep track of the students and MCT scores. The product EZ Test Tracker was utilized to retrieve the demographic information needed and the MCT scores. Each student who completed the computer based program Fast ForWord had their MCT proficiency recorded and their scale scores were recorded for the year previous and the current year the MCT was taken. These scores were recorded on Student Growth Survey.

Fast ForWord was a computer assisted instructional program to help accelerate the gaining of English language skills. Fast ForWord Language was developed and marketed by the Scientific Learning Corporation. This program provided intensive training in auditory perceptual and spoken language comprehension skills. Scientific Learning officials believed these skills were important to communicative competence and academic success. There were seven interactive, game-like exercises that provided practice in nonverbal and verbal sound discrimination, vocabulary recognition, and language

comprehension. All students went through a week of training to become familiar with the program, before they were allowed to begin the program.

Students completed the exercises for 55 to 60 minutes each day until they had completed the program, usually in eight to ten weeks. Students who had completed two programs had met the criteria to have successfully completed the Fast ForWord program. MCT scores were gathered from the participating school district. All students in the State of Mississippi were required to take the MCT to judge if the students were minimum, basic, proficient, or advanced. These MCT scores were used to rate schools. It was important to learn if the Fast ForWord program actually increased the student MCT scores and student achievement in the areas of reading and language.

The following data gathering tools will be utilized:

1. Appendix A, Perception Survey: Fast ForWord and MCT Scores. Recorded answers from Administrators, Teachers, Teacher Assistants, Parents, and or Guardians about their perceived effectiveness of the Fast ForWord program.
2. Appendix B, Student Growth Survey: Individual Record for Fast ForWord and MCT scores. Student MCT scores will be compared to the previous years MCT scores for students who have successfully completed the Fast ForWord program.

Student academic achievement was evaluated with the Mississippi Curriculum Test (MCT) in the spring of 2004, 2005, and 2006 before Fast ForWord use, and again in the spring of those school years, after participation

with the products. Students in the state of Mississippi were divided into four distinct areas on the MCT; they were from low to high Minimum, Basic, Proficient, and Advanced. The study utilized the raw scores and the four proficiency levels. They were calculated for the study, because the base line scores changed each year for students as they advance from one grade to another. School Staff was questioned about their perception on the effectiveness of the Fast ForWord program with the Survey. This was conducted at the school district's middle schools. Parents or guardians were questioned about their perception on the effectiveness of the Fast ForWord program with the Survey. This was conducted by students taking home the survey for parents to fill out and returned to school. There were no special situations that I am aware of.

The risks for this study were very minimal. School Staff and Parent or Guardian Surveys for this study were voluntary and anonymous. Individual student records were kept secure. The researcher was the person gathering the data from the rural county school district, so no student filled out the instrument. Student names were associated with the data only to connect MCT scores with the student name. The student names were not published; only the summary data obtained from the research was to be published. The data for the study was kept by the researcher in his school office. There was limited access to the data, only the researcher and the curriculum director for this school district had access to the data. The researcher kept the surveys and all records associated with this study.

Summary

The researcher gathered the MCT scores from the previous school year and compared it to the MCT scores for the current school year for each student who had successfully completed the Fast ForWord program during the school years 2004-2007. In particular, the researcher looked at the scale score each student made on their MCT in reading and language. A comparison of the student MCT scale scores was made to find the differences, improved or decreased, after having utilized the computer program Fast ForWord. The survey instrument utilized a Likert scale of one to five with one the lowest rating and five being the highest rating. The survey instrument had a high reliability indicating a .943 on Cronbach's Alpha on the first four questions about language and a high reliability indicating a .945 on Cronbach's Alpha on the second four questions about reading.

The school district gave their approval for the study to take place on November 28, 2006 (see Appendix C). The researcher received approval for the study on December 8, 2008 by the Institutional Review Board (see Appendix D). Data collection for the Perception Survey began on December 12, 2008 with the researcher calling the schools where the students had participated in the study. The principal at each school agreed to help print, distribute, and collect the surveys. A copy of the survey was given to each school involved in the study. The middle school staff members who were employed at the school during the school years 2004-2007, were asked to complete the survey. Data collection for Student Growth Survey began on December 19, 2008 with the researcher

requesting records of all students who successfully completed the Fast ForWord program during the school years 2004 to 2007. A complete list was obtained from the Fast ForWord coordinator for the school district. The researcher utilized an on line computer program named EZ Test Tracker.

CHAPTER IV

ANALYSIS OF DATA

Descriptive Statistics of the Sample

One hundred four, Perception Survey, surveys were completed entirely and returned. The survey utilized a Likert scale with five choices with one being the lowest and five being the highest level. There were eighteen males and eighty-eight females that returned the survey. Four administrators, seventy-two teachers, six teacher assistants, sixteen parents or guardians, and eight who listed none of the above returned the surveys. Teachers accounted for the largest group at about sixty-eight percent. Two of the surveys were returned without answering the questions. Frequency table see Table 4

Table 4

Frequency Table (Perception Survey)

Gender	Frequency	Percent
Male	18	17.0
Female	88	83.0
Total	106	100.0

Position	Frequency	Percent
Administration	4	3.8
Teacher	72	67.9
Teacher Assistant	6	5.7
Parent/Guardian	16	15.1
None of the Above	8	7.5
Total	106	100.0

Scale 1-5

Question three, "I felt that the time spent in the computer-based program Fast ForWord was an excellent use of instructional time for students to improve their MCT Language scores", had the lowest rating with a mean of 3.26 and a standard deviation of 1.19. Question five, "I felt that the computer-based program Fast ForWord helped students improve their MCT Reading scores and Question six, "I felt that the computer-based program Fast ForWord was beneficial to improving student confidence in Reading before taking the MCT", had the highest

rating with a mean of 3.45 and 3.44 respectively with standard deviations of 1.14 and 1.16 respectively. Descriptive Statistics see Table 5

Table 5

Descriptive Statistics (Perception Survey)

Fast ForWord Question's	Mean	Std. Deviation
1. FF helped students improve language scores?	3.33	1.19
2. FF improved student confidence in language?	3.37	1.18
3. FF excellent use of instructional time for language?	3.26	1.30
4. FF improved language based upon teacher ability?	3.33	1.24
5. FF helped students improve reading scores?	3.45	1.14
6. FF improved student confidence in reading?	3.44	1.16
7. FF excellent use of instructional time for reading?	3.33	1.31
8. FF improved reading based upon teacher ability?	3.38	1.22

* Scale 1-5

Two hundred fifty-one, Student Growth Survey, surveys were completed entirely by the researcher. There were one hundred fifty-three males and ninety-eight female's included in this study. Almost eighty-five percent of the students were Caucasian and about seventeen percent were listed as Special Education students. About half of the students, forty-seven percent, were labeled as Educational Disadvantaged. Frequency table see Table 6

Table 6

Frequency Table (Student Growth Survey)

Gender	Frequency	Percent
Female	98	39.0
Male	153	61.0
Total	251	100.0

Race	Frequency	Percent
Caucasian	213	84.9
Black	72	10.8
Asian	8	3.2
Hispanic	3	1.2
Native American	0	0.0
Total	251	100.0

Statistical Test Results

The researcher reviewed all of the data, collected utilizing the Perception Survey and the Student Growth Survey, for the three school years 2004-05, 2005-06, and 2006-07 and came up with the following results. The data collected, with the Perception Survey, indicated that the majority of people surveyed indicated a neutral to somewhat agreed response of M 3.36 STANDARD DEVIATION 1.22 that the Fast ForWord program improved

Language or Reading skills that would led to increased MCT scores in Language and Reading. The parents or guardians rated the Fast ForWord program the lowest of the position M 3.21 STANDARD DEVIATION 1.23 for the eight questions. The teachers indicated they thought the program worked slightly better M 3.37 STANDARD DEVIATION 1.18 which indicated a neutral to somewhat agreed response. An ancillary finding in this study was that although the administration thought highly of the Fast ForWord program M 4.75 STANDARD DEVIATION 0.39, no other group shared this confidence. Descriptive Statistics see Table 7

Table 7

Descriptive Statistics Perception (Perception Survey)

	N	Mean	Std. Deviation
Administration	4	4.75	0.39
Teacher	71	3.37	1.18
Teacher Assistant	6	3.25	1.63
Parent or Guardian	16	3.21	1.23

*Scale 1-5

The data collected with the student growth survey indicated that the majority of students did not improve their MCT Score after utilizing the Fast ForWord program during the school years 2004-05, 2005-06, and 2006-07 for this rural county school district. The researcher imputed the yearly increase of twenty-five scale score points associated with the student growth each year. It

was hypothesized that the majority of students completing the Fast ForWord program would significantly improve their MCT scale score in reading and language no matter what sub group the student was labeled as. The researcher collected data on two hundred fifty-one students utilizing student data surveys.

A paired samples t-test was conducted to compare whether there were significant differences in the scale score on the pre-test (MCT test prior to completing the Fast ForWord program) and the post test (MCT test after completing the Fast ForWord program) in the reading scale scores. "There was a significant difference in the scores for pre Fast ForWord MCT reading scores (M=509.02, SD=38.49) and the post Fast ForWord MCT reading scores (M=495.58, SD=44.64) conditions; $t(250)=5.58$, $p < .001$." These results suggest that using the Fast ForWord program did not improve MCT reading scores. The initial results indicated that the students had made gains on the MCT, but when calculated with the expected gain of twenty-five scale points, which was the expected growth of a student in the State of Mississippi, the results indicated a decrease in the student performance on the MCT after completing the Fast ForWord program. The results of the study were that the hypothesis was not supported. The researcher had expected to see a significant increase in the MCT reading scores.

A paired samples t-test was conducted to compare whether there were significant differences in the scale score on the pre-test (MCT test prior to completing the Fast ForWord program) and the post test (MCT test after completing the Fast ForWord program) in the language scale scores. "There

was a significant difference in the scores for pre Fast ForWord MCT language scores (M=510.12, SD=40.58) and the post Fast ForWord MCT language scores (M=500.39, SD=40.19) conditions; t(250)= 4.32, p < .001." These results suggest that using the Fast ForWord program did not improve MCT language scores. The initial results indicated that the students had made gains on the MCT, but when calculated with the expected gain of twenty-five scale points, which was the expected growth of a student in the State of Mississippi, the results indicated a decrease in the student performance on the MCT after completing the Fast ForWord program. The results of the study were that the hypothesis was not supported. The researcher had expected to see a significant increase in the MCT language scores.

The two hundred fifty-one participants had an average decreased difference, in their reading mean scale score of 13.44, from pre-test to post-test MCT scale scores indicating the Fast ForWord treatment did not improve the students scale scores over the expected growth in MCT reading scale scores. The two hundred fifty-one participants had an average decreased difference; in their language mean scale score of 9.73, from pre-test to post-test MCT scale scores indicating the Fast ForWord treatment did not improve the students scale scores over the expected growth in MCT language scale scores. The student scale scores actually decreased when the yearly growth was figured into the equation in both reading and language.

A Chi-Square was then utilized to see if the students had made any change on the level of proficiency: Minimum, Basic, Proficient, or Advanced after

completing the Fast ForWord program. This test was run by grade level and by the sub groups of gender, race, special education, and economically disadvantaged. A Chi-Square by grade level indicated a decrease in the proficiency levels by grades six and seven and an increase in the proficiency levels in grade eight. Grade eight had a small number of only twenty-three students who were included in the study. Ninety-five sixth graders and one hundred thirty-three seventh graders were included in the study.

In grade six fourteen percent of the students improved a proficiency level, sixty-two percent of the students remained in the same proficiency level, and twenty-one percent of the students dropped a proficiency level. In grade seven sixteen percent of the students improved a proficiency level, fifty-four percent of the students remained in the same proficiency level, and thirty percent of the students dropped a proficiency level. In grade eight forty-three percent of the students improved a proficiency level, forty-three percent of the students remained in the same proficiency level, and thirteen percent of the students dropped a proficiency level. See Tables 8-10

Table 8

*Sixth Grade Pre-MCT * Post MCT Crosstabulation*

		Post MCT Category				
		Minimal	Basic	Proficient	Advanced	Total
Pre MCT Category						
Minimal	Count	4	4	2	0	10
	% within premctcat	40.0%	40.0%	20.0%	0.0%	100.0%
	% within postmctcat	26.7%	25.0%	3.3%	0.0%	10.5%
Basic	Count	4	5	5	0	14
	% within premctcat	28.6%	35.7%	35.7%	0.0%	100.0%
	% within postmctcat	26.7%	31.3%	8.3%	0.0%	14.7%
Proficient	Count	7	7	48	2	64
	% within premctcat	10.9%	10.9%	75.0%	3.1%	100.0%
	% within postmctcat	46.7%	43.8%	80.0%	50.0%	67.4%
Advanced	Count	0	0	5	2	7
	% within premctcat	.0%	.0%	71.4%	28.6%	100.0%
	% within postmctcat	.0%	.0%	8.3%	50.0%	7.4%
Total						
	Count	15	16	60	4	95
	% within premctcat	15.8%	16.8%	63.2%	4.2%	100.0%
	% within postmctcat	100.0%	100.0%	100.0%	100.0%	100.0%

Table 9

*Seventh Grade Pre-MCT * Post MCT Crosstabulation*

		Post MCT Category				
		Minimal	Basic	Proficient	Advanced	Total
Pre MCT Category						
Minimal	Count	14	1	2	1	18
	% within premctcat	77.8%	5.6%	11.1%	5.6%	100.0%
	% within postmctcat	60.9%	2.2%	3.4%	16.7%	13.5%
Basic	Count	8	14	12	2	36
	% within premctcat	22.2%	38.9%	33.3%	5.6%	100.0%
	% within postmctcat	34.8%	30.4%	20.7%	33.3%	27.1%
Proficient	Count	1	31	44	3	79
	% within premctcat	1.3%	39.2%	55.7%	3.8%	100.0%
	% within postmctcat	4.3%	67.4%	75.9%	50.0%	59.4%
Advanced	Count	0	0	0	0	0
	% within premctcat	.0%	.0%	0.0%	0.0%	0.0%
	% within postmctcat	.0%	.0%	0.0%	0.0%	0.0%
Total						
	Count	23	46	58	6	133
	% within premctcat	17.3%	34.6%	43.6%	4.5%	100.0%
	% within postmctcat	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10

*Eighth Grade Pre-MCT * Post MCT Crosstabulation*

		Post MCT Category				
		Minimal	Basic	Proficient	Advanced	Total
Pre MCT Category						
Minimal	Count	5	5	2	0	12
	% within premctcat	41.7%	41.7%	16.7%	0.0%	100.0%
	% within postmctcat	83.3%	41.7%	40.0%	0.0%	52.2%
Basic	Count	1	5	3	0	9
	% within premctcat	11.1%	55.6%	33.3%	0.0%	100.0%
	% within postmctcat	16.7%	41.7%	60.0%	0.0%	39.1%
Proficient	Count	0	1	0	0	1
	% within premctcat	0.0%	100.0%	0.0%	0.0%	100.0%
	% within postmctcat	0.0%	8.3%	0.0%	0.0%	4.3%
Advanced	Count	0	1	0	0	1
	% within premctcat	0.0%	100.0%	0.0%	0.0%	100.0%
	% within postmctcat	0.0%	8.3%	0.0%	0.0%	4.3%
Total						
	Count	6	12	5	0	23
	% within premctcat	26.1%	52.2%	21.7%	0.0%	100.0%
	% within postmctcat	100.0%	100.0%	100.0%	100.0%	100.0%

A Chi-Square indicated a majority of the students made no improvement in their proficiency level regardless of gender, race, special education status, or the economically disadvantaged status of the student. Male students indicated an

increase of seventeen percent and a decrease of twenty-eight percent in the study. Female students indicated an increase in eighteen percent and a decrease in twenty-four percent in the study. See Tables 11 and 12

Table 11

Male Students Pre-MCT * Post MCT Crosstabulation

		Post MCT Category				
		Minimal	Basic	Proficient	Advanced	Total
Pre MCT Category						
Minimal	Count	14	5	3	1	23
	% within premctcat	60.9%	21.7%	13.0%	4.3%	100.0%
	% within postmctcat	56.0%	11.1%	3.9%	14.3%	15.0%
Basic	Count	6	12	12	1	31
	% within premctcat	19.4%	38.7%	38.7%	3.2%	100.0%
	% within postmctcat	24.0%	26.7%	15.8%	14.3%	20.3%
Proficient	Count	5	28	58	4	95
	% within premctcat	5.3%	29.5%	61.1%	4.2%	100.0%
	% within postmctcat	20.0%	62.2%	76.3%	57.1%	62.1%
Advanced	Count	0	0	3	1	4
	% within premctcat	0.0%	0.0%	75.0%	25.0%	100.0%
	% within postmctcat	0.0%	0.0%	3.9%	14.3%	2.6%
Total						
	Count	25	45	76	7	153
	% within premctcat	16.3%	29.4%	49.7%	4.6%	100.0%
	% within postmctcat	100.0%	100.0%	100.0%	100.0%	100.0%

Table 12

*Female Students Pre-MCT * Post MCT Crosstabulation*

		Post MCT Category				
		Minimal	Basic	Proficient	Advanced	Total
Pre MCT Category						
Minimal	Count	9	5	3	0	17
	% within premctcat	52.9%	29.4%	17.6%	0.0%	100.0%
	% within postmctcat	47.4%	17.2%	6.4%	0.0%	17.3%
Basic	Count	7	12	8	0	28
	% within premctcat	25.0%	42.9%	28.6%	3.6%	100.0%
	% within postmctcat	36.8%	41.4%	17.0%	33.3%	20.3%
Proficient	Count	3	11	34	1	49
	% within premctcat	6.1%	22.4%	69.4%	2.0%	100.0%
	% within postmctcat	15.8%	37.9%	72.3%	33.3%	50.0%
Advanced	Count	0	1	2	1	4
	% within premctcat	0.0%	25.0%	50.0%	25.0%	100.0%
	% within postmctcat	0.0%	3.4%	4.3%	14.3%	2.6%
Total						
	Count	19	29	47	3	98
	% within premctcat	19.4%	29.6%	48.0%	3.1%	100.0%
	% within postmctcat	100.0%	100.0%	100.0%	100.0%	100.0%

Caucasian students indicated an increase of nineteen percent and a decrease of twenty-five percent in the study. African American students indicated an increase of eleven percent and a decrease of thirty percent in the study. Asian

students indicated no increase and a decrease of thirty-seven percent in the study. Hispanic students indicated an increase of thirty-three percent and a decrease of thirty-three percent in the study. See Tables 13 and 14

Table 13

*Caucasian Pre-MCT * Post MCT Crosstabulation*

		Post MCT Category				
		Minimal	Basic	Proficient	Advanced	Total
Pre MCT Category						
Minimal	Count	17	9	6	1	33
	% within premctcat	51.5%	27.3%	18.2%	3.0%	100.0%
	% within postmctcat	51.5%	15.5%	5.5%	11.1%	15.5%
Basic	Count	11	19	18	2	50
	% within premctcat	22.0%	38.0%	36.0%	4.0%	100.0%
	% within postmctcat	33.3%	30.6%	16.5%	22.2%	23.5%
Proficient	Count	5	33	81	4	123
	% within premctcat	4.1%	26.8%	65.9%	3.3%	100.0%
	% within postmctcat	15.2%	53.2%	74.3%	44.4%	57.7%
Advanced	Count	0	1	4	2	7
	% within premctcat	0.0%	14.3%	57.1%	28.6%	100.0%
	% within postmctcat	0.0%	1.6%	3.7%	22.2%	3.3%
Total						
	Count	33	62	109	9	213
	% within premctcat	15.5%	29.1%	51.2%	4.2%	100.0%
	% within postmctcat	100.0%	100.0%	100.0%	100.0%	100.0%

Table 14

*African Americans Pre-MCT * Post MCT Crosstabulation*

		Post MCT Category				
		Minimal	Basic	Proficient	Advanced	Total
Pre MCT Category						
Minimal	Count	4	1	0	0	5
	% within premctcat	80.0%	20.0%	0.0%	0.0%	100.0%
	% within postmctcat	50.0%	12.5%	0.0%	0.0%	18.5%
Basic	Count	2	3	1	0	6
	% within premctcat	33.3%	50.0%	16.7%	0.0%	100.0%
	% within postmctcat	25.0%	37.5%	10.0%	0.0%	22.2%
Proficient	Count	2	4	9	1	16
	% within premctcat	12.5%	25.0%	56.3%	6.3%	100.0%
	% within postmctcat	25.0%	50.0%	90.0%	100.0%	59.3%
Advanced	Count	0	0	0	0	0
	% within premctcat	0.0%	0.0%	0.0%	0.0%	0.0%
	% within postmctcat	0.0%	0.0%	0.0%	0.0%	0.0%
Total						
	Count	8	8	10	1	27
	% within premctcat	29.6%	29.6%	37.0%	3.7%	100.0%
	% within postmctcat	100.0%	100.0%	100.0%	100.0%	100.0%

Students labeled Special education students indicated an increase of fourteen percent and a decrease of twenty-nine percent in the study. Regular education students indicated an increase of eighteen percent and a decrease of

twenty-six percent in the study. Students labeled as educationally disadvantaged indicated an increase of fifteen percent and a decrease of thirty-two percent. Students not labeled as educationally disadvantaged indicated an increase of twenty percent and a decrease of twenty-one percent in the study. See Tables 15-18

Table 15

*SPED Students Pre-MCT * Post MCT Crosstabulation*

		Post MCT Category				
		Minimal	Basic	Proficient	Advanced	Total
Pre MCT Category						
Minimal	Count	12	4	0	0	16
	% within premctcat	75.0%	25.0%	0.0%	0.0%	100.0%
	% within postmctcat	66.7%	40.0%	0.0%	0.0%	38.1%
Basic	Count	3	1	1	0	5
	% within premctcat	60.0%	20.0%	20.0%	0.0%	100.0%
	% within postmctcat	16.7%	10.0%	7.7%	0.0%	11.9%
Proficient	Count	3	5	11	1	20
	% within premctcat	15.0%	25.0%	55.0%	5.0%	100.0%
	% within postmctcat	16.7%	50.0%	84.6%	100.0%	47.6%
Advanced	Count	0	0	1	0	1
	% within premctcat	0.0%	0.0%	100.0%	0.0%	100.0%
	% within postmctcat	0.0%	0.0%	7.7%	0.0%	2.4%
Total						
	Count	18	10	13	1	42
	% within premctcat	42.9%	23.8%	31.0%	2.4%	100.0%
	% within postmctcat	100.0%	100.0%	100.0%	100.0%	100.0%

Table 16

*Regular Education Students Pre-MCT * Post MCT Crosstabulation*

		Post MCT Category				
		Minimal	Basic	Proficient	Advanced	Total
Pre MCT Category						
Minimal	Count	11	6	6	1	24
	% within premctcat	45.8%	25.0%	25.0%	4.2%	100.0%
	% within postmctcat	42.3%	9.4%	5.5%	11.1%	11.5%
Basic	Count	10	23	19	2	54
	% within premctcat	18.5%	42.6%	35.2%	3.7%	100.0%
	% within postmctcat	38.5%	35.9%	17.3%	22.2%	25.8%
Proficient	Count	5	34	81	4	124
	% within premctcat	4.0%	27.4%	65.3%	3.2%	100.0%
	% within postmctcat	19.2%	53.1%	73.6%	44.4%	59.3%
Advanced	Count	0	1	4	2	7
	% within premctcat	0.0%	14.3%	57.1%	28.6%	100.0%
	% within postmctcat	0.0%	1.6%	3.6%	22.2%	3.3%
Total						
	Count	26	64	110	9	209
	% within premctcat	12.4%	30.6%	52.6%	4.3%	100.0%
	% within postmctcat	100.0%	100.0%	100.0%	100.0%	100.0%

Table 17

*Economical Disadvantaged Students Pre-MCT * Post MCT Crosstabulation*

		Post MCT Category				
		Minimal	Basic	Proficient	Advanced	Total
Pre MCT Category						
Minimal	Count	13	5	2	0	20
	% within premctcat	65.0%	25.0%	10.0%	0.0%	100.0%
	% within postmctcat	44.8%	13.2%	4.3%	0.0%	17.1%
Basic	Count	10	14	8	1	33
	% within premctcat	30.3%	42.4%	24.2%	3.0%	100.0%
	% within postmctcat	34.5%	36.8%	17.0%	33.3%	28.2%
Proficient	Count	6	19	34	1	60
	% within premctcat	10.0%	31.7%	56.7%	1.7%	100.0%
	% within postmctcat	20.7%	50.0%	72.3%	33.3%	51.3%
Advanced	Count	0	0	3	1	4
	% within premctcat	0.0%	0.0%	75.0%	25.0%	100.0%
	% within postmctcat	0.0%	0.0%	6.4%	33.3%	3.4%
Total						
	Count	29	38	47	3	117
	% within premctcat	24.8%	32.5%	40.2%	2.6%	100.0%
	% within postmctcat	100.0%	100.0%	100.0%	100.0%	100.0%

Table 18

*Non-Economical Disadvantaged Students Pre-MCT * Post MCT Crosstabulation*

		Post MCT Category				
		Minimal	Basic	Proficient	Advanced	Total
Pre MCT Category						
Minimal	Count	10	5	4	1	20
	% within premctcat	50.0%	25.0%	20.0%	5.0%	100.0%
	% within postmctcat	66.7%	13.9%	5.3%	14.3%	14.9%
Basic	Count	3	10	12	1	26
	% within premctcat	11.5%	38.5%	46.2%	3.8%	100.0%
	% within postmctcat	20.0%	27.8%	15.8%	14.3%	19.4%
Proficient	Count	2	20	58	4	84
	% within premctcat	2.4%	23.8%	69.0%	4.8%	100.0%
	% within postmctcat	13.3%	55.6%	76.3%	57.1%	62.7%
Advanced	Count	0	1	2	1	4
	% within premctcat	0.0%	25.0%	50.0%	25.0%	100.0%
	% within postmctcat	0.0%	2.8%	2.6%	14.3%	3.0%
Total						
	Count	15	36	76	7	134
	% within premctcat	11.2%	26.9%	56.7%	5.2%	100.0%
	% within postmctcat	100.0%	100.0%	100.0%	100.0%	100.0%

Summary

One hundred four Perception Surveys were completed entirely and returned. Two hundred fifty-one, Student Growth Survey, surveys were

completed entirely by the researcher. The researcher reviewed all of the data, collected utilizing student perception survey and student data survey, for the three school years 2004-05, 2005-06, and 2006-07 and came up with the following results.

The data indicated that the majority of people surveyed indicated a neutral to somewhat agreed response that the Fast ForWord program improved language or reading skills. An ancillary finding in this study was that although the administration thought highly of the Fast ForWord program no other group shared this confidence. The data collected indicated that the majority of students did not improve their MCT score after utilizing the Fast ForWord program. It was hypothesized that the majority of students completing the Fast ForWord program would significantly improve their MCT scale score in reading and language no matter which sub group the student was identified in.

A paired samples t-test was conducted to compare whether there were significant differences in the scale score on the pre-test and the post test in the reading and language scale scores. These results suggested that using the Fast ForWord program did not improve MCT reading and language scores. A Chi-Square was then utilized to see if the students had made any change on the level of proficiency: Minimum, Basic, Proficient, or Advanced after completing the Fast ForWord program. A Chi-Square indicated a decrease in the proficiency levels by grades six and seven and an increase in the proficiency levels in grade eight. Grade eight had a small number of only twenty-three students who were included

in the study. Ninety-five sixth graders and one hundred thirty-three seventh graders were included in the study.

CHAPTER V

CONCLUSIONS

Introduction

In chapter one a problem was identified, by the researcher, as low student MCT scores and low student achievement in the state of Mississippi. This was a problem that many of the schools in the state of Mississippi were dealing with. A tutorial method that claimed to help improve reading and language scores was identified as Fast ForWord. There was a great need to improve educational opportunities for all students. The *No Child Left Behind Act of 2001* stated that schools should put forth great effort in reducing the achievement gap and strengthening the educational level of all students. There was a huge disparity of academic achievement between different groups of students based on race, gender, special education status, and if the student was economically disadvantaged. The achievement gap between these groups remained significant and the gap had to be closed.

Conclusions and Discussion

It was hypothesized, by this researcher, that students who utilized the Fast ForWord product would significantly increase their MCT scale scores in the areas of reading and language. The sample size of two hundred fifty-one students was by far the largest sample that the researcher found in other studies on Fast ForWord. This study found that there was no significant increase in student language and reading MCT scale scores by students who utilized the Fast

ForWord program. In addition the educational staff and parents did not have a good perception about the Fast ForWord program improving MCT scale scores in the areas of reading and language. Principals on the hand had very good perceptions about the Fast ForWord programs ability to improve MCT scale scores in reading and language.

The results from the respondents of this study indicated that the majority of people, who had an interest in this study, did not indicate that the product Fast ForWord helped students improve their MCT scale score in the areas of language and reading. This was in contrast to a majority of the research that indicated that the product Fast ForWord should have increased the reading and language skills. Troia (2004) evaluated the effectiveness of Fast ForWord Language and stated it had a substantial impact on oral language skills and reading performance of the children in his study. Mohler (2005) studied the progress of seventh grade students who participated in the computer assisted intervention program known as Fast ForWord and the data suggested that students who participated in the Fast ForWord reading program increased their level of test scores in reading. Another study performed by Loeb (2001) found that Fast ForWord Language was a viable intervention option for children with language problems. The case studies suggested that children were likely to show improvements on standardized tests of language when they had a positive experience utilizing the Fast ForWord product.

There was no question that students needed intensive interventions in order to improve their language and reading scores. The larger question was

what type of intervention would be best for the lower performing students who consistently ranked as minimum or basic according to their MCT scores. Some type of intervention was needed for the low performing students to assist them in increasing their MCT reading and language scale scores. According to Ediger (1993) the younger students needed an interesting reading program of study to achieve academically. Middle school students needed to be involved individually in finding and selecting reading materials to guarantee student attention. Students needed to be interested in the topic in order for them to enjoy the reading assignment. Research has indicated that the more a student read the higher the level of comprehension the student had and it correlated to higher test scores on standardized tests.

Past research had indicated the importance and the necessity of intensive interventions with low performing students. Quality teachers, involved parents, and interested administrators all had to work together to insure that all students had the tools necessary to be successful and to increase their reading and language skills. Low performing students needed to have had successful interventions in order to be able to improve academically. Due to these findings research into quality interventions needs to be continued and ongoing especially in the areas of reading and language.

Research Questions

1. Was there a significant improved difference in language MCT scores, by middle school students of all sub groups (gender, ethnicity, and social

economic status) that have successfully completed the computer based program Fast ForWord?

The answer to research question number one was no. The data indicated that there was a significant decreased difference in language MCT scores by middle school students of all sub groups who had successfully completed the computer based program Fast ForWord. Students decreased an average of 9.73 scale points on the language section of the MCT. Every sub group of students showed a decrease in the MCT language scores. The findings were in contrast to what Loeb (2001) found, that Fast ForWord Language was a viable intervention option for children with language problems.

2. Was there a significant improved difference in reading MCT scores, by middle school students of all sub groups (gender, ethnicity, and social economic status) that have successfully completed the computer based program Fast ForWord?

The answer to research question number two was no. The data indicated that there was a significant decreased difference in reading MCT scores by middle school students of all sub groups who had successfully completed the computer based program Fast ForWord. Students decreased an average of 13.44 scale points on the reading section of the MCT. Every sub group of students showed a decrease in the MCT reading scores. The findings were in contrast to what Mohler (2005) suggested, that students who participated in the Fast ForWord reading program experienced increased levels test scores in reading level, concentration, and memory.

3. Did teachers, staff, and parents feel that the computer based program Fast ForWord helped students improve their language MCT scores?

The answer to research question number three was neutral to slightly agree with a mean of 3.33 on a five point Likert scale and a standard deviation of 1.19. Teachers, staff, and parents did not indicate a strong feeling that the computer based program Fast ForWord helped students improve their language MCT scores.

4. Did teachers, staff, and parents feel that the computer-based program Fast ForWord was beneficial to improving student confidence in language before taking the MCT?

The answer to research question number four was neutral to slightly agree with a mean of 3.37 on a five point Likert scale and a standard deviation of 1.18. Teachers, staff, and parents did not indicate a strong feeling that the computer based program Fast ForWord helped student confidence in language before taking the MCT.

5. Did teachers, staff, and parents feel that the time spent in the computer-based program Fast ForWord was an excellent use of instructional time for students to improve their language MCT scores?

The answer to research question number four was neutral to slightly agree with a mean of 3.26 on a five point Likert scale and a standard deviation of 1.30. Teachers, staff, and parents did not indicate a strong feeling that the computer based program Fast ForWord was an excellent use of instructional time for

students to improve their language MCT scores. This was the lowest rated perception about the use of the Fast ForWord program.

6. Did teachers, staff, and parents feel that the teacher's ability to assist students in the classroom with the computer based program Fast ForWord improved their MCT language scores?

The answer to research question number six was neutral to slightly agree with a mean of 3.33 on a five point Likert scale and a standard deviation of 1.24. Teachers, staff, and parents did not indicate a strong feeling that the ability of the teacher to assist students in the classroom improved student's language MCT scores.

7. Did teachers, staff, and parents feel that the computer-based program Fast ForWord helped students improve their reading MCT scores?

The answer to research question number seven was neutral to slightly agree with a mean of 3.45 on a five point Likert scale and a standard deviation of 1.14. Teachers, staff, and parents did not indicate a strong feeling that the computer based program Fast ForWord helped students improve their reading MCT scores. This was the highest rated perception about the use of the Fast ForWord program.

8. Did teachers, staff, and parents feel that the computer-based program Fast ForWord was beneficial to improving student confidence in reading before taking the MCT?

The answer to research question number eight was neutral to slightly agree with a mean of 3.44 on a five point Likert scale and a standard deviation of 1.16.

Teachers, staff, and parents did not indicate a strong feeling that the computer based program Fast ForWord helped student confidence in reading before taking the MCT.

9. Did teachers, staff, and parents feel that the time spent in the computer-based program Fast ForWord was an excellent use of instructional time for students to improve their reading MCT scores?

The answer to research question number four was neutral to slightly agree with a mean of 3.33 on a five point Likert scale and a standard deviation of 1.31. Teachers, staff, and parents did not indicate a strong feeling that the computer based program Fast ForWord was an excellent use of instructional time for students to improve their reading MCT scores.

10. Did teachers, staff, and parents feel that the teacher's ability to assist students in the classroom with the computer based program Fast ForWord improved their MCT reading scores?

The answer to research question number six was neutral to slightly agree with a mean of 3.38 on a five point Likert scale and a standard deviation of 1.22. Teachers, staff, and parents did not indicate a strong feeling that the ability of the teacher to assist students in the classroom improved student's reading MCT scores.

Implications for Fast ForWord

This study "The Impact of Fast ForWord on MCT Scores and Student Achievement" was divided into two separate sections. Section one referred to the perceptions that people had on whether the computer based program Fast

ForWord had the ability to improve student MCT scores. People involved in the perceptions were administrators, teachers, teacher assistants, and parents or guardians. The second section referred to whether the computer based program Fast ForWord improved middle school student MCT scale scores for the school years 2004-2007.

The researcher reviewed data about the perceptions that school personnel and parents or guardians had with the effectiveness of the Fast ForWord program. It was interesting to find out that the teachers, teacher's assistants, and the parents or guardians did not have a very high opinion of the effectiveness of the Fast ForWord program. They rated it between being neutral and slightly agreeing, closer to neutral, that the program improved language and reading scores on the MCT. On the other hand, the administrators were very high on the Fast ForWord program. The administrators rated the program between strongly agree and agree that the program improved language and reading scores on the MCT. The parents and the teachers worked closer with the students than did the administrators and should have had a better understanding if the program was effective or not.

The researcher reviewed the data concerning whether the Fast ForWord program was effective in producing improved MCT scores in reading and language. The student MCT scores in reading and language improved, but when the yearly growth was figured in the result was actually a decrease in the MCT scores. This finding was contrary to Viadero (2004) finding, who stated Fast ForWord was a computer based assisted program to improve reading skills in

students. The State expected an increase in the student growth each year of twenty-five scale points.

Limitations

The researcher believed that a weakness of this study was that the pre-test was given in the previous academic year and the post test given at the end of the academic year, after the student had completed the Fast ForWord product. Students were assigned to Fast ForWord either during the first semester or the second semester. Normally fifty percent of the students would not take their post test until after they were out of the Fast ForWord program for an entire semester, ninety days. Ideally the student would have followed a logical progression during the same academic year:

1. Evaluation with a Pre-Test, MCT.
2. Follow the protocol and complete the Fast ForWord program.
3. Evaluation with a Post Test, MCT, immediately after completing the Fast ForWord program.
4. Evaluate the difference in the students' MCT scores.
5. Report the findings.

The researcher believed that this procedure would have given a more accurate description on how the students performed after utilizing the Fast ForWord product.

Limitations of this study also included the grade distribution of only grades six through eight. All grades levels, three through eight, that tested with the MCT needed to be included. Another limitation was the study only gathered data from

three years. Data needed to be included for several years to see if any trends developed. This study included the three years of data with most of the first year being wiped out by Hurricane Katrina.

Recommendations for Policy and Practice by Administrators

The data in this study demonstrated that the Fast ForWord product did not significantly improve MCT scores, with this group of students, in the areas of language and reading. There was a sufficient sample size of two hundred fifty one students included in the study. This study "The Impact of Fast ForWord on MCT Scores and Student Achievement" was very practical to the practicing administrator. The majority of schools in this State and in the Country wanted to find a program that improved student scores on the standardized test. This researcher does not believe that there was one magical tool that educators could have utilized to solve their problem of increasing standardized test scores and improving student achievement. There must be a combined effort of the parent, student, community, and the school to improve student test scores. The school did not have total control or influence of the students enrolled at school. There must be a collaborative effort of all the entities involved to support education for our students to exhibit outstanding growth.

The data in this study also demonstrated that the stakeholders, teachers, teacher assistants, and parents or guardians did not feel that the Fast ForWord product significantly improved MCT scores. There was a sufficient sample size of one hundred four administrators, teachers, teacher assistants, and parents or guardians included in the study. The ancillary finding in this study was that

although the administration felt that the Fast ForWord program was beneficial to the students in improved MCT scores, the teachers, teacher assistants, and parents or guardians felt otherwise.

The educational institutions must identify the low performing students. Once identified the schools have to make an individual plan of improvement for each student, just like an IEP for a special education student. The school can tackle a school wide deficiency that affects all students, but they still needed to set up a plan for each student who is not performing at the proficient level. This plan can have multiple levels of accommodations for each student. The researcher believes that one of the accommodations must include some time set aside for one on one tutoring with a qualified teacher who is interested in the student. This tutoring time would be in addition to the quality instruction in the classroom that the student should already be receiving. A computerized program that targets the student weakness may be utilized to assist the students with his learning problems, but should not be the single accommodation. The student needs individualized support with a teacher who can monitor the students' progress.

Recommendations for Future Research

This research project included data from one of the many school districts in the State. There were one hundred fifty-seven school districts in the State of Mississippi. Even though this was the largest study, by far, that the researcher found on the Fast ForWord product the research needs to be continued. The question, "Was there a significant improved difference in language and reading

MCT scores, by middle school students that had successfully completed the computer based program Fast ForWord?", needs to be explored in many other school districts in this State and nationally, to see if a correlation could be found. In addition the study needs to be expanded to include other grade levels of students from grades three through eight. The MCT included these grade levels and the new MCT2 also included these grade levels.

Future research should include repeating this study for a five to ten year period to see what trends would be found. This study included the three years of data with most of the first year being wiped out by Hurricane Katrina. This research project was a snapshot of three grades for three years. In order to be fair to the product Fast ForWord the research should continue for a minimum of five to ten years to obtain a more realistic comparison of if the product was effective in raising the MCT scores in reading and language.

Future research should include students in grades three to eight, not just the grades six, seven, and eight. The study should be included in urban areas and not just in a rural county school district. A new study should also include other areas of the State and not just the Southeastern section of the State of Mississippi. The impact of Fast ForWord on MCT scores and student achievement need's to include a national sample of students and not just the students of Mississippi. Students from Mississippi almost always have been listed on the bottom level in comparison to the other fifty states. Maybe this product would have a more favorable response in another state. Mississippi had issues with funding education to a level consistent with other states and that had

contributed to the problem of too many low performing students. Another reason the State had many low performing students is due to the lack of high expectations. Many in the field of education, in this State, had not set high enough expectations for the students. Students needed to be challenged, they will only achieve to the level set before them. Low expectations for students have resulted in low performances by students. Future research should compare low performing students who utilized the Fast ForWord program to those who did not use this program.

Summary

The researcher reviewed data about the perceptions that school personnel and parents had with the effectiveness of the Fast ForWord program. It was interesting to find out that the educators and parents did not have a very high opinion of the effectiveness of the Fast ForWord program. They rated it between being neutral and agreeing that the program improved language and reading scores on the MCT. On the other hand, the administrators were very high on the Fast ForWord program. The administrators rated the program between strongly agree and agree that the program improved language and reading scores on the MCT. The parents and the teachers worked closer with the students than did the administrators and should have had a better understanding if the program was effective or not.

The researcher reviewed the data concerning whether the Fast ForWord program was effective in producing improved MCT scores in reading and language. The student MCT scores in reading and language improved, but when

the yearly growth was figured in the result was actually a decrease in the MCT scores. This finding was contrary to Troia (2004) who evaluated the effectiveness of Fast ForWord Language and stated it had a substantial impact on oral language skills and reading performance of the children in his study. The State expected an increase in the student growth each year of twenty-five scale points in order to retain their current level of proficiency.

The researcher believed that a weakness of this study was that the pre-test was given in the previous academic year and the post test given at the end of the current academic year, after the student had completed the Fast ForWord product. Limitations of this study also included the grade distribution of only grades six through eight. All grades levels, three through eight, that test with the MCT needed to be included. Another limitation was the study only gathered data from three years. Data needed to be included for several years to see if any trends developed. This study included the three years of data with most of the first year being wiped out by Hurricane Katrina.

The data obtained in this study demonstrated that the Fast ForWord product did not significantly improve MCT scores, with this group of students, in the areas of language and reading. The data in this study also demonstrated that the stakeholders: teachers, teacher assistants, and parents or guardians, did not feel that the Fast ForWord product significantly improved MCT scores. The ancillary finding in this study was that although the administration felt that the Fast ForWord program was beneficial to the students in improved MCT scores, the teachers, teacher assistants, and parents or guardians felt otherwise.

Future research should include repeating this study for a five to ten year period to see what trends would be found. This study included three years of data with most of the first year being wiped out by Hurricane Katrina. This research project was a snapshot of three grades for three years. In order to be fair to the product Fast ForWord the research should continue for a minimum of five to ten years to obtain a more realistic comparison of if the product was effective in raising the MCT scores in reading and language.

In this paper it was hypothesized that students, regardless of race, gender, SPED status, or economical status, in grades six, seven, and eight, who had successfully completed the Fast ForWord program, would improve significantly in the areas of reading and language on the Mississippi Curriculum Test. The literature reviewed in Chapter two supported this hypothesis. Viadero (2004) stated Fast ForWord was a computer based assisted program to improve reading skills in students. The data that this researcher found with this school district and this set of students indicated otherwise. The majority of students decreased their MCT reading and language scale score when factoring in the yearly growth. The hypothesis was not supported.

APPENDIX A

PERCEPTION SURVEY

Questionnaire Fast ForWord and MCT scores

by Michael Harvey Van Winkle

Graduate student University of Southern Mississippi

Whereas no assurances can be made concerning results that may be obtained (since results from investigational studies can not be predicted) the researcher will take every precaution consistent with the best scientific practice. Participation in this project is completely voluntary and subjects can withdraw from this study at any time without penalty, prejudice, or loss of benefits. Questions concerning the research should be directed to Michael Van Winkle at 872-0256. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about the rights as a research subject should be directed to the Chair of Institutional Review Board, The University of Southern Mississippi, 118 College Drive # 5147, Hattiesburg, MS 39406-0001, (601) 266-6820. A copy of this form will be given to the participant.

This questionnaire is completely anonymous and is to be completed by people who either worked at a school or had a child that participated in the Fast ForWord program during one, two, or all three school years 2004-05, 2005-06, or 2006-07. All responses will be kept confidential. Thank you for your help.

INSTRUCTIONS: Answer the following questions 1-3 by circling the correct response. Circle only one response for each question.

1. School Site? East Central School 1 St. Martin School 2 Vancleave School 3

2. Gender? Male Female

3. Which position below best describes you?

Administrator Teacher Teacher Assistant Parent or Guardian

None of the above

Please go to page 2

INSTRUCTIONS: Please rate how strongly you disagree or agree with each of the following statements by circling the appropriate number:

1 = Strongly Disagree, 2 = Somewhat Disagree, 3 = Neutral, 4 = Somewhat Agree, and 5 = Strongly Agree. Circle only one number for each statement. Thank you for your time.

1 2 3 4 5	1. I felt that the computer-based program Fast ForWord helped students improve their MCT Language scores.
1 2 3 4 5	2. I felt that the computer-based program Fast ForWord was beneficial to improving student confidence in Language before taking the MCT.
1 2 3 4 5	3. I felt that the time spent in the computer-based program Fast ForWord was an excellent use of instructional time for students to improve their MCT Language scores.
1 2 3 4 5	4. I felt that the teacher's ability to assist students in the classroom with the computer-based program Fast ForWord improved their MCT Language scores.
1 2 3 4 5	5. I felt that the computer-based program Fast ForWord helped students improve their MCT Reading scores.
1 2 3 4 5	6. I felt that the computer-based program Fast ForWord was beneficial to improving student confidence in Reading before taking the MCT.
1 2 3 4 5	7. I felt that the time spent in the computer-based program Fast ForWord was an excellent use of instructional time for students to improve their MCT Reading scores.
1 2 3 4 5	8. I felt that the teacher's ability to assist students in the classroom with the computer-based program Fast ForWord improved their MCT Reading scores.

APPENDIX B

STUDENT GROWTH SURVEY

Individual record for Fast ForWord and MCT scores

by Michael Harvey Van Winkle

Graduate student: The University of Southern Mississippi

This record was completed by the researcher for students who participated in the Fast ForWord program during the following school years 2004-05, 2005-06, or 2006-07 during the school day.

Student Name: _____ / _____
Last / First

Please circle only one answer for questions 2-5.

1. School Site: East Central (1) St. Martin (2) Vancleave (3)
2. Student Gender? Male Female
3. Student Ethnicity?

Caucasian, African American, Asian, Native-American, Hispanic

4. Student was economically disadvantaged? Yes No
5. School year student completed the Fast ForWord program?
   _____

6. 5th Grade School Year: 2004-05 2005-06 2006-07
7. 5th Grade MCT Proficiency: Minimum, Basic, Proficient, Advanced
8. 5th Grade Scale Score on the MCT:

   Reading _____ Language _____
9. 6th Grade School Year: 2004-05 2005-06 2006-07
10. 6th Grade MCT Proficiency: Minimum, Basic, Proficient, Advanced
11. 6th Grade Scale Score on the MCT:

    Reading _____ Language _____
12. 7th Grade School Year: 2004-05 2005-06 2006-07
13. 7th Grade MCT Proficiency: Minimum, Basic, Proficient, Advanced
14. 7th Grade Scale Score on the MCT:

    Reading _____ Language _____
15. 8th Grade School Year: 2004-05 2005-06 2006-07
16. 8th Grade MCT Proficiency: Minimum, Basic, Proficient, Advanced
17. 8th Grade Scale Score on the MCT:

    Reading _____ Language _____

APPENDIX C

SCHOOL DISTRICT PERMISSION

[redacted] County School District
[redacted]
[redacted]
12210 COLONEL VICKREY ROAD
POST OFFICE BOX 5069
[redacted], MISSISSIPPI 39565-5069

TELEPHONE
AREA CODE 228
826-1757
FAX 826-3393

November 28, 2006

To Whom It May Concern:

Michael Van Winkle has permission to do the following:

The Purpose of this study is to find out if there is a significant improved difference in reading and language MCT scores, by the middle school students in The [redacted] County School District that have successfully completed the Fast ForWord program. The study will examine three years of the Mississippi Curriculum Test (MCT) scores by middle school students, who have successfully completed the Fast ForWord program, in the [redacted] School District. This study will concentrate on middle school students, those who are in the sixth, seventh, and eight grades.

Rucks H. Robinson

Rucks H. Robinson

APPENDIX D

INTERNAL REVIEW BOARD PERMISSION

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Institutional Review Board

118 College Drive #5147
Hattiesburg, MS 39406-0001
Tel: 601.266.6820
Fax: 601.266.5509
www.usm.edu/irb

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **28110303**
PROJECT TITLE: **The Impact of Fast Forward on MCT Scores and Student Achievement**
PROPOSED PROJECT DATES: **11/01/08 to 03/31/09**
PROJECT TYPE: **Dissertation or Thesis**
PRINCIPAL INVESTIGATORS: **Michael Harvey Van Winkle**
COLLEGE/DIVISION: **College of Education & Psychology**
DEPARTMENT: **Educational Leadership & Research**
FUNDING AGENCY: **N/A**
HSPRC COMMITTEE ACTION: **Expedited Review Approval**
PERIOD OF APPROVAL: **12/04/08 to 12/03/09**

Lawrence A. Hosman

Lawrence A. Hosman, Ph.D.
HSPRC Chair

12-8-08
Date

REFERENCES

Amberg, E. (2001). Software - Focus on Special Needs. The Journal. Retrieved October 06, 2006, from http://www.thejournal.com/articles/14602

Benigno, C. (2006). Teaching Excellence or Survival? A reflective guide to the greatest profession in the world. Tucson, AZ Wheatmark.

Bishop, D. V. M., Adams, C. V. and Rosen, S. (2006). Resistance of grammatical impairment to computerized comprehension training in children specific and non-specific language impairments. *International Journal of Language & Communication Disorders,* 41, 19-40.

Burns, M. (2003). Fast ForWord products open a child's window to language. *Autism Asperger's Digest,* 1.

Ediger, M. (1993). Encouraging interest in reading in middle school. *Educational Digest*, 59, 57-60.

Fast ForWord by Scientific Learning Corporation. (2006). Best Practices Implementation Workbook. Oakland, CA: Scientific Learning Corporation.

Fast ForWord by Scientific Learning Corporation. (2006), Teacher's Handbook: a resource guide. Oakland, CA: Scientific Learning Corporation.

Feds get 'F' for Katrina response to schools: report (October 2007). *American School Board Journal,* 194, 10.

Fey, M. (2001). Language changes associated with Fast ForWord-Language. *American Journal of Speech-Language Pathology*, 10, 216-230.

Gillam, R. B., Loeb, D. F., & Friel-Patti, S. (2001). Looking back: A summary of five exploratory studies on Fast ForWord. *American Journal of Speech-Language Pathology,* 10*(3),* 269-273.

Hass, E. (2006) A Blueprint for Excellence: Expectations, Encouragement and Equality. An Interview with Superintendent Rucks H. Robinson. *http://www.scilearn.com/results/index.php*

Loeb, D. F., Stoke, C., & Fey, M. E. (2001). Language changes associated with Fast ForWord-language: Evidence from case studies. *American Journal of Speech-Language Pathology,* 10(3), 216-230.

Marler, J. A., Champlin, C. A., & Gillam, R. B. (2001). Backward and simultaneous masking measured in children with language-learning impairments who received intervention with Fast ForWord or Laureate Learning Systems software. *American Journal of Speech-Language Pathology, 10*(3), 258-268.

Mathis, William J., (2003). No Child Left Behind: Costs and Benefits. *Phi Delta Kappan*, 84(9).

Mohler, R. (2005). The effect on literacy levels by the Fast ForWord program and its connection with students' behavior and academic achievement. (Doctoral dissertation, Pacific Lutheran University, 2005). (MAI 44/03 1430078).

Troia, G. (2004). Migrant students with limited English proficiency: Can fast ForWord Language[TM] make a difference in their language skills and academic achievement?. Remedial and Special Education, 24.

Unpublished doctoral dissertation, Pacific Lutheran University.

Slattery, C. (2003). *The impact of a computer-based training system on strengthening phonemic awareness and increasing reading ability level.* Unpublished doctoral dissertation, Widener University.

Viadero, D. (2004). Educational forecasting. *Education Week*, 24, 28-30.

Williams, J. (2008). District accountability: More bark than bite? *Scholastic Administrator,* 7(4), 43-48.